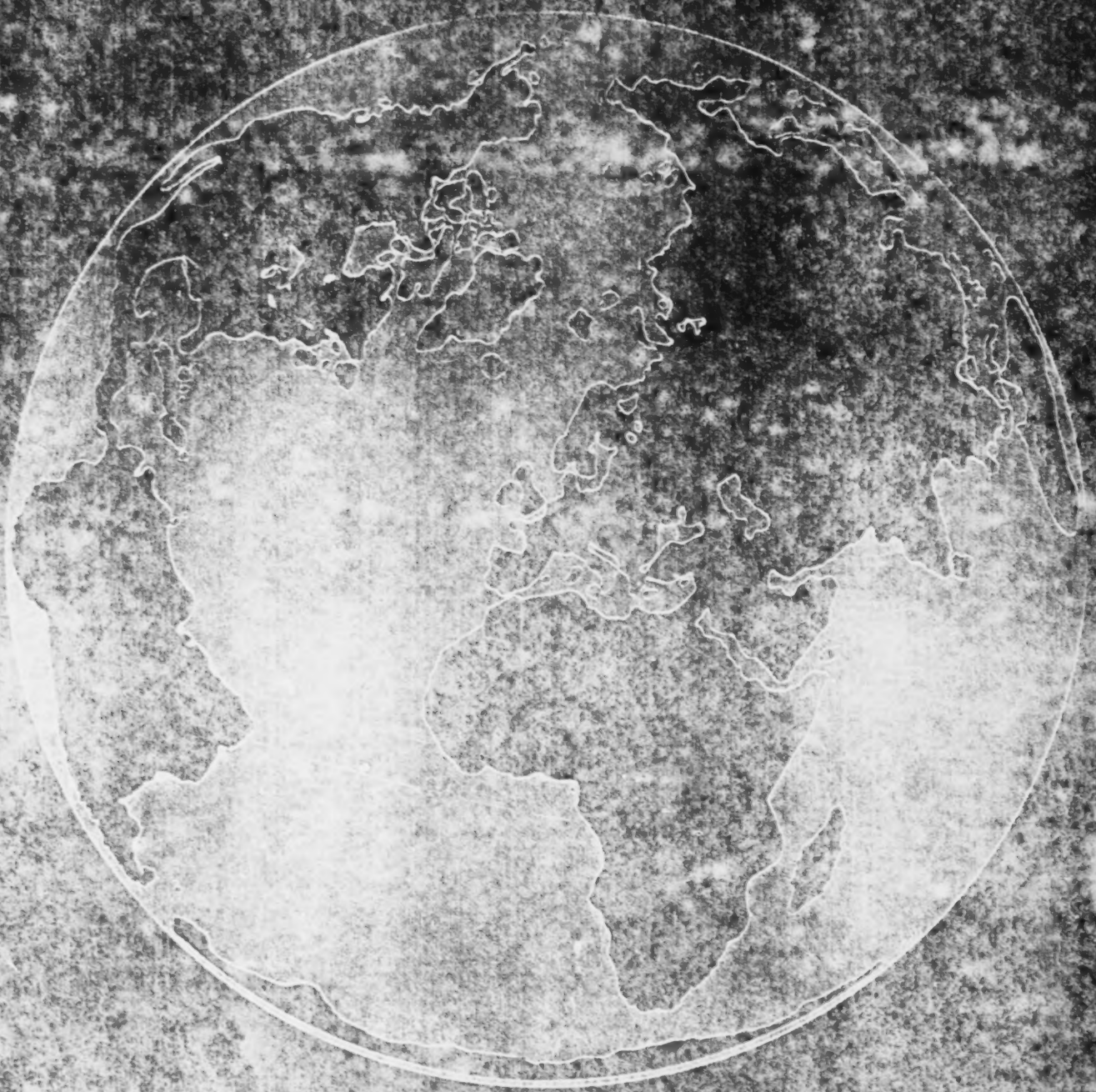




**International Petroleum
Encyclopedia
1982**

State-owned companies changed the shape of the industry.....4	
---	--

NORTH AMERICA

United States	30
Canada	76

AFRICA

Algeria	86
Angola	86
Cameroon.....	88
Congo.....	90
Gabon.....	91
Tunisia.....	91
Egypt	92
Ivory Coast.....	94
Libya.....	96
Kenya	99
Morocco.....	99
Nigeria.....	100
Sudan.....	101
Other Africa.....	102

EUROPE

Austria	104
Belgium	104
Denmark.....	105
Finland.....	107
France	107
Greece.....	110
Ireland	114
Italy.....	114
Netherlands.....	116
Norway	121
Portugal	124
Sweden	126
Switzerland	127
United Kingdom	130
West Germany	137
North Sea	139

LATIN AMERICA

Argentina.....	158
Brazil	162
Bolivia.....	162
Colombia	166
Ecuador.....	168
Guatemala.....	169
Mexico	169
Peru.....	174
Panama	174
Trinidad & Tobago	176
Venezuela.....	179
Other Latin America.....	179

ASIA PACIFIC

Australia	180
Bangladesh	185
India.....	185
Indonesia.....	186
Japan.....	190
Malaysia	196
New Zealand.....	197
Philippines	198
Singapore.....	200
Sri Lanka.....	200
Thailand.....	201
Other Asia Pacific	201

CHINA

202

EASTERN EUROPE.....

212

U.S.S.R.

216

MIDDLE EAST

Bahrain	226
Iran	226
Iraq	228
Israel.....	230
Kuwait.....	230
Jordan	230

Lebanon	231
Oman.....	231
Qatar	232
Saudi Arabia	234
Syria	237
Turkey	237
United Arab Emirates	238
Yemen	240

Field index.....	243
Offshore outlook.....	249
Canada offshore special.....	266
Anadarko basin special	271
Overthrust Belt special	279
Williston basin special	292
Mexico special	298
Southeast Asia special	316
Africa special.....	326
Chalk formation.....	331
Worldwide oil and gas.....	334
Major oil fields and production.....	336
Gas production table	354
Non-Communist well completions	355
Oil production statistics.....	356
Oil consumption statistics....	360
Refining capacity.....	361
Refining survey	366
Synthetic fuels.....	385
Shale oil	397
Conversion table	404
Pipelines.....	406
Major company data.....	422
International directory	425
Gas processing.....	440
Ad index	463

INDEX TO MAPS

NORTH AMERICA

North America.....	32-33
Northeastern U.S.	36-37
Wyoming.....	44
Overthrust Belt.....	44
Alaska.....	46-47
California.....	51
Los Angeles Basin.....	52
Western U.S.....	54-55

Anadarko Basin.....	60
Permian Basin.....	62
Southeastern U.S.....	64-65
Texas Gulf Coast.....	68-69
Louisiana Gulf Coast	70-71
Western Canada.....	76-77
Arctic Islands.....	79

AFRICA

Africa.....	(insert)
West Africa.....	89
Egypt.....	93
North Africa.....	96-97
Nigeria.....	101

EUROPE

Europe.....	106-107
France.....	111
Italy.....	115
Po Valley.....	116

N. Europe (Lowlands)...	122, 123
Central Europe.....	127
North Sea.....	140-141

LATIN AMERICA

South America.....	159
S. America (southern portion).....	161
Colombia.....	167
Ecuador, Bolivia.....	168
Mexico, Central America	170-171
Venezuela.....	178-179

ASIA/PACIFIC

Australia.....	181
Southern Asia.....	184-185
Indonesia.....	188-189
Japan.....	191

CHINA

China.....	206,207
------------	---------

EASTERN EUROPE

Eastern Europe.....	212-213
---------------------	---------

U.S.S.R.

Volga/Ural.....	219
Azerbaijan.....	221
Western Siberia.....	223
Timan-Pechora.....	224
U.S.S.R.....	facing page 224

MIDDLE EAST

Middle East.....	227
Iraq.....	229
Persian Gulf.....	236-237

USE THIS HANDY LISTING BY SUBJECTS TO QUICKLY FIND NEEDED INFORMATION

Advertisers' index.....	463	North Sea.....	139
Consumption statistics.....	360	Offshore	
Conversion table.....	404	Activity in Texas waters.....	265
Directory, worldwide.....	425	Daily average crude produc- tion.....	257
Drilling		Depth range of subsea com- pletions.....	249
Overthrust belt.....	279	Gas production.....	261
Well completions.....	355	Gulf of Suez fields, construc- tion.....	255
Williston basin.....	292	Qatar offshore.....	259
Fields		Worldwide offshore produc- tion.....	256
Index.....	243	Oil	
Major, with production	336	Historical statistics.....	356
Gas		Major fields.....	334
Exporters, major.....	27	Production by country.....	334
Production by countries.....	354	Well completions.....	355
Gas processing		Worldwide production.....	336
Summary table, worldwide.....	440	OPEC	
Survey.....	441	How OPEC oil production rose and fell.....	9
International crude production markets.....	11	Changing pattern of OPEC prices, control.....	10
International directory.....	425	OPEC oil export value vs. to- tal export value.....	22
Japan's changing crude-supply pattern.....	12	OPEC oil-production histo- ry.....	20
Major companies		OPEC's share of total world crude-oil exports.....	23
Capital, exploration costs.....	422	OPEC's term supplies to ma- jor oil companies.....	9
Crude, NGL production.....	423	Outlook for OPEC consump- tion of refined products.....	26
Crude runs.....	424	Petroleum export rev- enues.....	14
Gas production.....	422	Profile of OPEC oil produc- tion.....	24
Net income, gross operation revenue.....	424	Refining capacity growth.....	19
Refined product sales.....	424	Regional origin of OPEC oil exports.....	21
Major fields.....	336	Rise in OPEC consumption of refined products.....	25
Mexico		Overthrust Belt.....	279
Petrochemicals program.....	301	Pipeline	
Refining capacity in construction.....		Average pipeline construc- tion costs.....	417
Middle East ownership interlocks.....	8		

Investment, liquids pipelines.....	418	Reserves, worldwide.....	334
Investment split — crude-oil pipelines.....	417	Special reports	
Onshore cost trends.....	419	Africa.....	326
Pipeline costs.....	420	Anadarko basin.....	271
Planned non-Communist pipeline construction in 1982.....	410	Chalk formation.....	331
Planned non-Communist pipeline construction, 1982 and beyond.....	414	East Canada offshore.....	266
Pricing of products.....	13	Mexico.....	298
Production		North Sea.....	139
By country.....	334	Overthrust Belt.....	279
Statistics.....	356	Shale oil.....	397
Well completions.....	355	Southeast Asia.....	316
Worldwide production.....	336	Synthetic fuels.....	385
Products		Williston basin.....	292
Consumption statistics.....	360	World trade in crude, products	8
Sales by companies.....	431	Worldwide	
Refining		Consumption.....	360
Historical statistics.....	365	Gas processing.....	440
Operating refineries.....	366	Oil and gas at a glance.....	334
Refineries survey.....	367	Production.....	336
Worldwide refining capacity.....	361	Refineries.....	336,361
		Reserves.....	336
		Well completions.....	355

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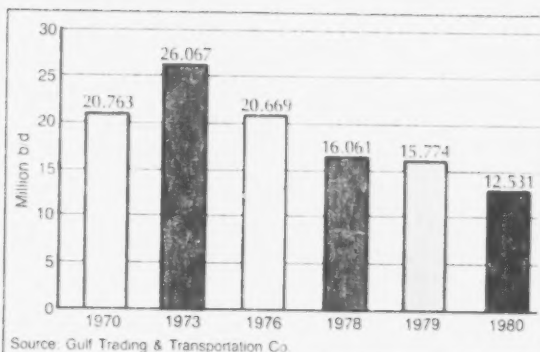
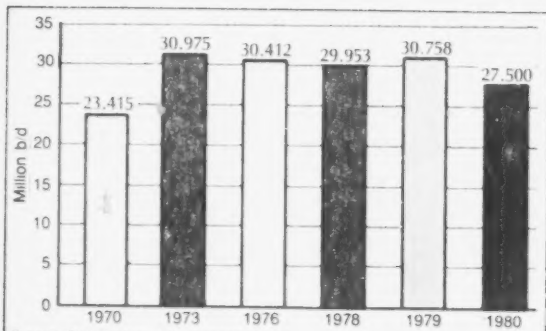
9

How OPEC oil production rose, fell

3

OPEC term supplies to major firms

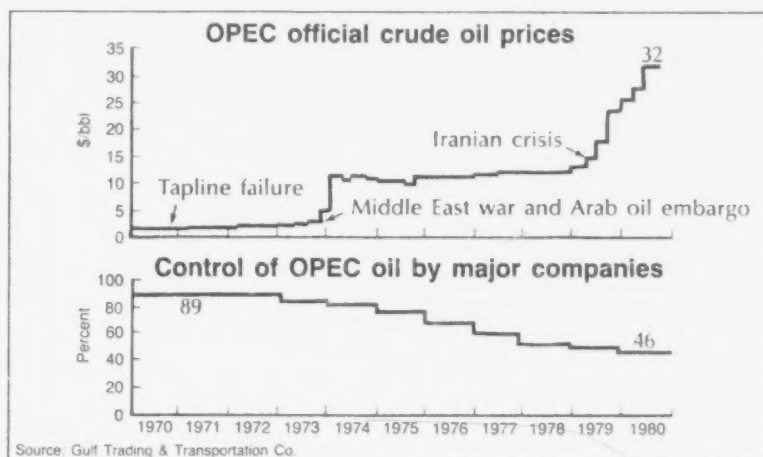
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"In the past, the oil industry has been a source of considerable international interest."

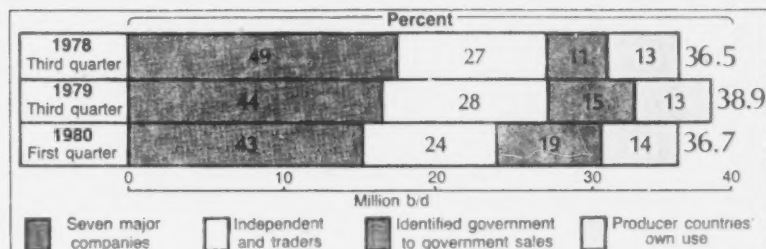
The changing pattern of OPEC oil prices, control

5



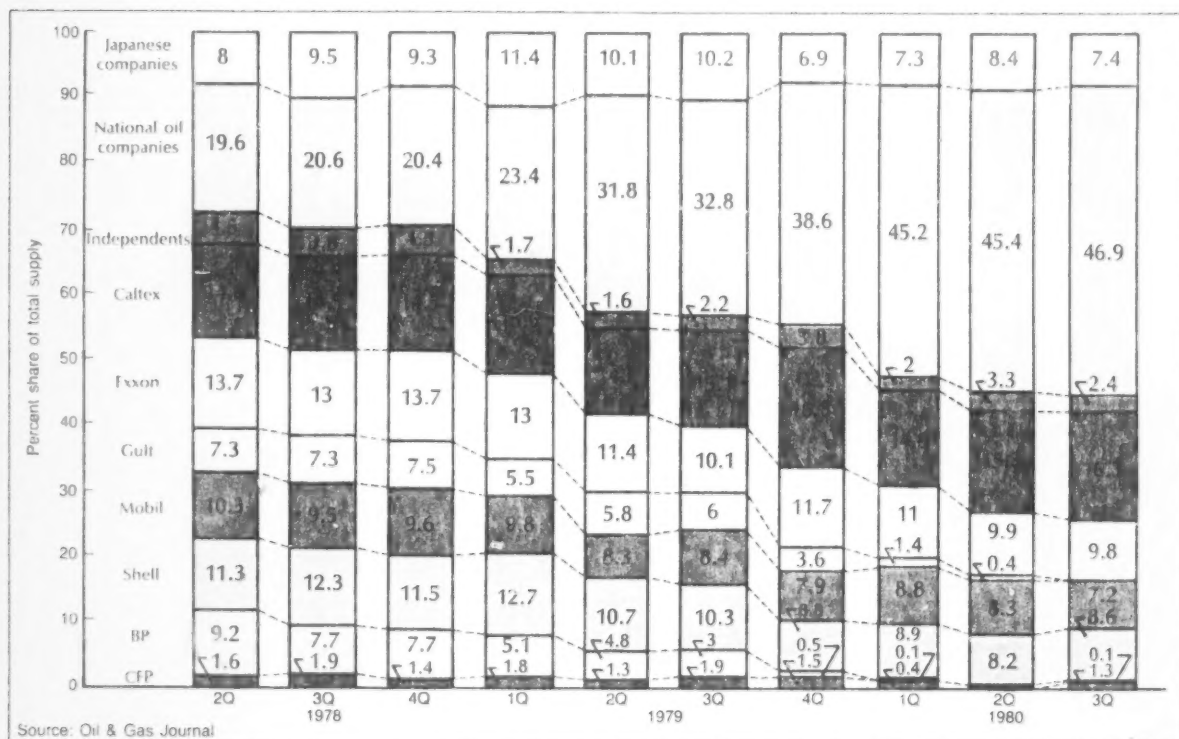
Where international crude production goes*

6



*World excluding Communist areas and North America. Source: Shell Briefing Service

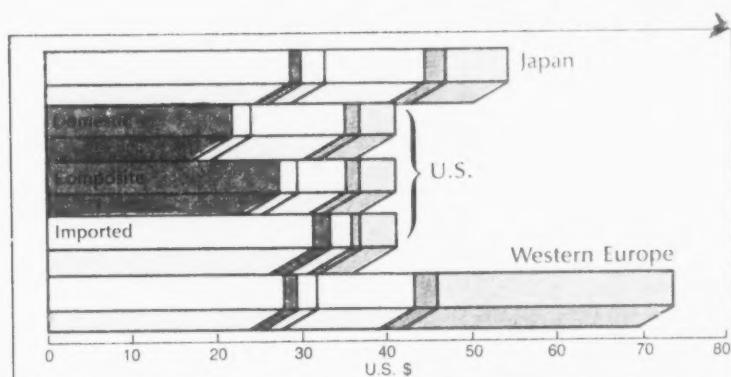
Japan's changing crude oil supply pattern



13

What makes up the price of products*

8



Legend

- Crude oil costs fob†
- Crude oil costs cif
- Freight costs
- Refining costs
- Distribution costs
- Dealers' margin
- Taxes

*Average price of 1 bbl of refined products and its components during 1980.

†Based on Arabian light crude.

Source: OPEC Bulletin

The history of OPEC's petroleum export revenues

	1960	1961	1962	1963	1964	1965 Million U.S. \$	1966	1967	1968	1969	1970
Algeria	*237	221	116	439	372	465	479	502	570	619	666
Ecuador	—	—	—	—	1	2	1	1	1	1	1
Gabon	10	9	10	11	13	14	16	36	42	48	50
Indonesia	221	260	216	269	267	272	203	240	298	383	446
Iran	723	722	706	799	1,109	1,138	1,149	1,748	1,688	1,857	2,358
Iraq	445	499	500	579	634	660	698	610	755	761	784
Kuwait	855	853	961	1,029	1,146	1,160	1,235	1,233	1,313	1,387	1,596
Libya	—	12	153	392	734	1,037	1,280	1,468	2,211	2,622	2,829
Nigeria	12	32	47	57	81	183	265	207	94	373	713
Qatar	*126	*122	*128	*138	*151	*163	179	200	209	220	225
Saudi Arabia	813	876	951	1,022	1,089	1,267	1,493	1,596	1,776	1,869	2,349
United Arab Emirates	—	—	*17	*47	*84	*83	247	258	341	412	485
Venezuela	1,983	2,033	2,156	2,155	2,253	2,254	2,166	2,282	2,305	2,254	2,345
Total	5,425	5,639	5,961	6,937	7,934	8,698	9,411	10,381	11,603	12,806	14,847

*Estimated.

Source: OPEC Bulletin, based in part on data from the International Monetary Fund

15

Table 1

1971	1972	1973	1974	1975	1976	1977	1978	1979
605	1,018	1,523	4,267	4,295	4,759	5,535	5,816	7,513
1	60	192	527	516	565	484	523	944
78	74	169	654	781	895	986	803	1,406
565	913	1,609	5,211	5,311	6,004	7,298	7,438	*8,917
3,494	3,637	5,614	20,906	19,634	22,917	23,585	21,769	18,646
1,062	953	1,836	6,505	8,177	9,114	9,507	10,851	21,292
2,143	2,370	3,033	9,293	7,886	8,951	8,821	9,463	16,456
2,879	2,472	3,456	7,124	6,034	8,297	9,747	9,489	15,221
1,352	1,786	2,883	9,009	7,462	9,406	10,931	9,499	16,629
299	382	601	1,979	1,757	2,137	1,975	2,293	3,563
3,472	4,546	7,657	31,163	27,885	36,314	41,114	37,369	59,242
801	1,035	1,740	6,306	6,727	8,238	9,098	8,584	12,676
2,847	2,857	4,328	10,550	8,324	8,763	9,110	8,740	12,680
19,598	22,103	34,641	113,494	104,789	126,360	138,191	133,037	195,185

Table 2
OPEC's 1980 exports

	Volume (1,000 bbl crude oil and refined products)	Value (\$Millions)
Saudi Arabia*	9,600	104,200
Iraq	2,400	26,500
Nigeria	1,900	20,000
Venezuela	1,800	18,900
Libya	1,700	23,200
United Arab Emirates	1,700	19,200
Kuwait*	1,600	18,300
Indonesia	1,200	10,500
Iran	1,100	11,600
Algeria	900	11,700
Qatar	460	5,200
Gabon	170	1,600
Ecuador	130	1,200
Total	24,660	272,100

*Includes 50% of Neutral Zone produc-
tion.

Source: Shell Briefing Service

Table 3

OPEC'S shrinking financial surpluses

	1980	1981	1982
	Billion \$		
MORGAN GUARANTY'S VIEW			
Export of goods and services	304	300	316
Of which, oil revenues	277	268	281
Imports of goods and services*	202	227	269
Investment income, net†	9	12	14
Current account	111	85	61
Official transfers, net	-8	-8	-7
Current account after transfers	103	77	54

	1981	1982	1983	1984	1985
	Billion \$				
BANKERS TRUST'S VIEW					
Current income	338.0	346.6	384.9	428.2	486.9
Of which, oil revenue	268.2	262.8	297.6	331.3	378.6
Current expenditures	251.6	306.2	357.1	447.8	511.5
Net revenues\$	86.5	40.4	27.8	-19.6	-24.6

*Excludes investment income, but includes private transfers. †Excludes oil sector investment, which is included in the calculation of oil revenues. §Transfers not included.

"The price of nonoil energy supplies are likely to be the largest factor for coal."

Table 4

DOE's outlook for non-Communist oil supply*

	1973	†1980 Million b d	1985	1990
Non-OPEC				
United States§	11.4	10.8	9.6	9.7
Canada	2.1	1.7	1.5	1.5
North Sea	¶	2.2	2.7	2.7
Other developed countries*	0.9	0.8	0.9	0.9
Mexico	0.5	2.1	4.0	4.6
Other LDCs	2.5	3.6	4.2	4.1
Subtotal	17.4	21.2	22.9	23.5
OPEC				
Algeria	1.1	1.0	0.8	0.7
Ecuador	0.2	0.2	0.2	0.1
Gabon	0.1	0.2	0.2	0.1
Indonesia	1.3	1.6	1.5	1.4
Iran	5.9	1.6	2.5	2.5
Iraq	2.0	2.6	3.0	3.5
Kuwait	2.8	1.4	1.2	1.2
Libya	2.2	1.8	1.4	1.2
Neutral Zone	0.5	0.5	0.5	0.4
Nigeria	2.1	2.1	1.8	1.6
Qatar	0.6	0.5	0.4	0.4
Saudi Arabia	7.3	9.6	8.5	8.0
United Arab Emirates	1.5	1.7	1.3	1.3
Venezuela	3.4	2.2	2.0	1.9
NGL	0.3	0.8	1.4	1.8
Subtotal	31.3	27.8	26.7	26.1
Communist Net exports	0.6	0.9	-0.5	-1.0
Total supply	49.3	49.9	49.1	48.6

*Includes natural gas liquids, synthetic coal liquids, and shale oil. †Preliminary. §Includes processing gain. ¶Less than 50,000 b.d. •Includes Israel and South Africa.

Source: U.S. Department of Energy

Table 5

How OPEC's refining capacity will grow

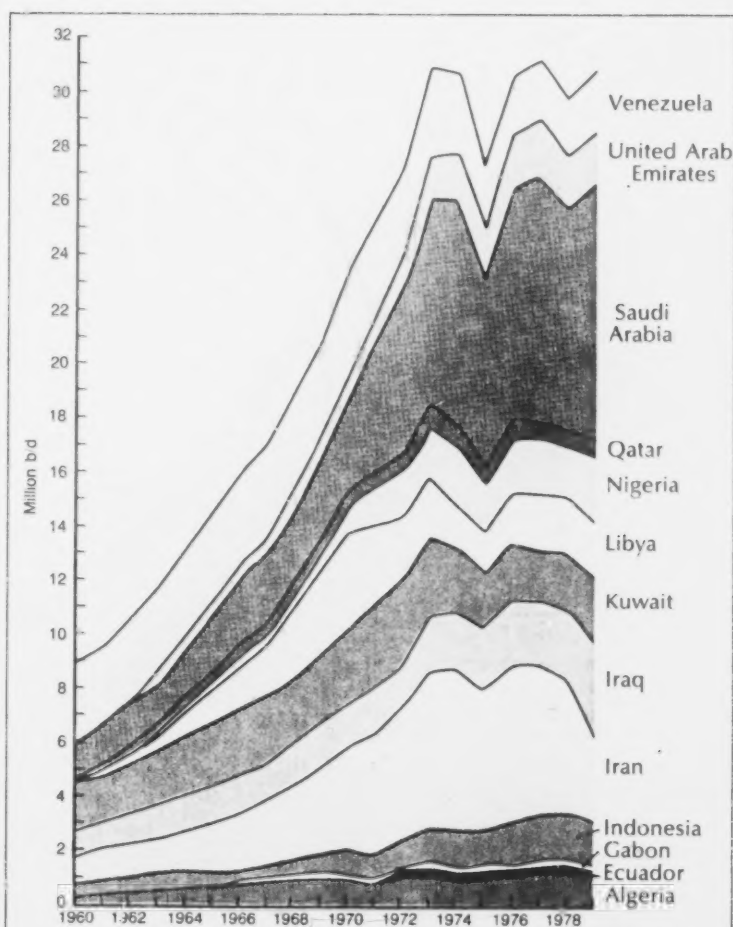
	1980	— Projects: Completion year and capacity —				Total 1984
		1981	1982	1983	1984	
		b/d				
Algeria	436,000	175,000				611,500
Ecuador	94,500				83,000	177,500
Gabon	44,000					44,000
Indonesia	471,000		400,000			871,000
Iran	1,265,000					1,265,000
Iraq	305,500		290,000		400,000	995,500
Kuwait	594,000	106,000				700,000
Libya	130,000		220,000			350,000
Nigeria*	260,000					260,000
Qatar	10,500	50,000		50,000		110,500
Saudi Arabia†	1,178,000	170,000	120,000	5325,000	500,000	2,293,000
U.A.E.	15,000	120,000		60,000	25,000	220,000
Venezuela	1,444,900					1,444,900
Total	6,248,900	621,000	1,030,000	435,000	1,008,000	9,342,900

*A fourth refinery with 100,000 b/d crude capacity and a cracking unit is planned, but neither plant site nor construction date are fixed. †Additional: Juaymah (Aramco) project will be completed in 1986 with 250,000 b/d. \$1982-84.

Source: OPEC Bulletin

A look at OPEC oil production history

9

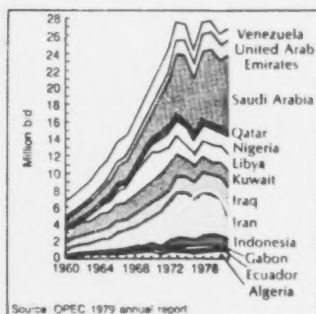


Source: 'EC 1979 annual report

22

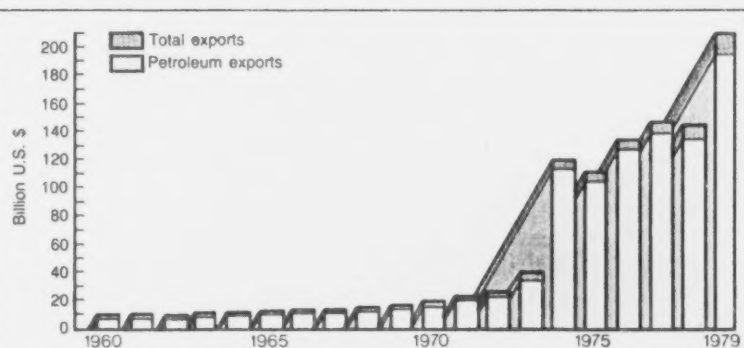
OPEC crude exports

11



OPEC oil export value vs. total export value

12

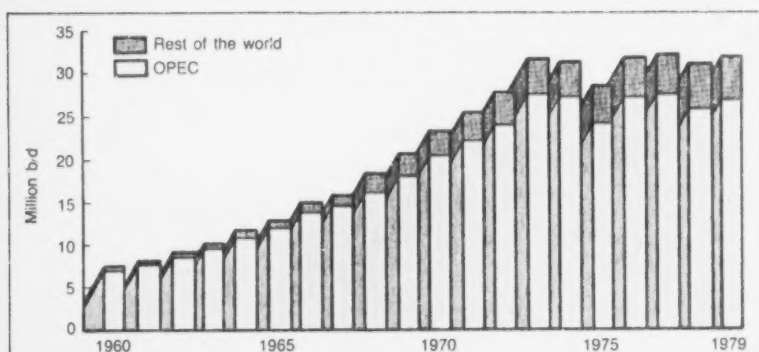


23

"A new format" and not evolved, whatever the reason may be, the new format is not the same as the old one.

OPEC's share of total world crude oil exports

13

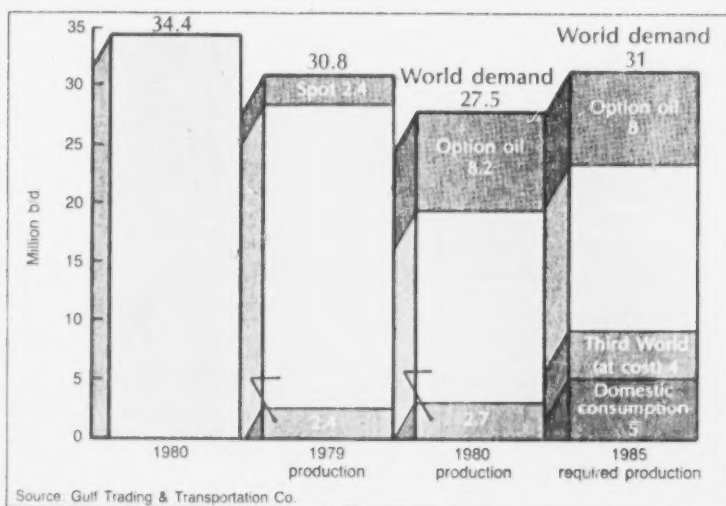


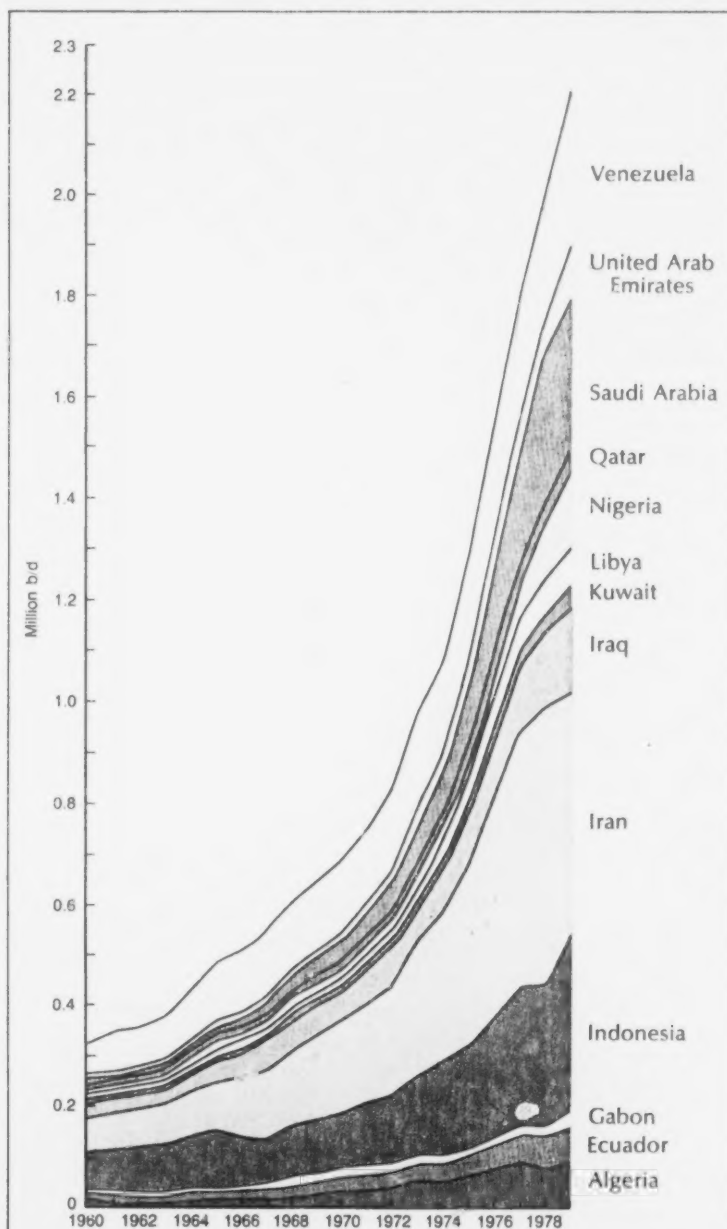
Source: OPEC Bulletin

24

A profile of OPEC oil production

14



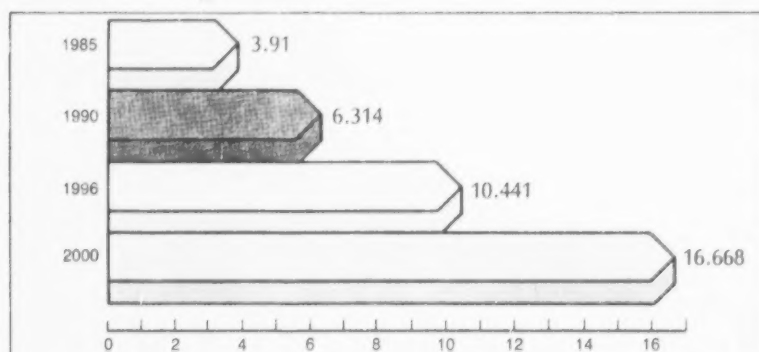


Source: OPEC Bulletin

26

Outlook for OPEC consumption of products

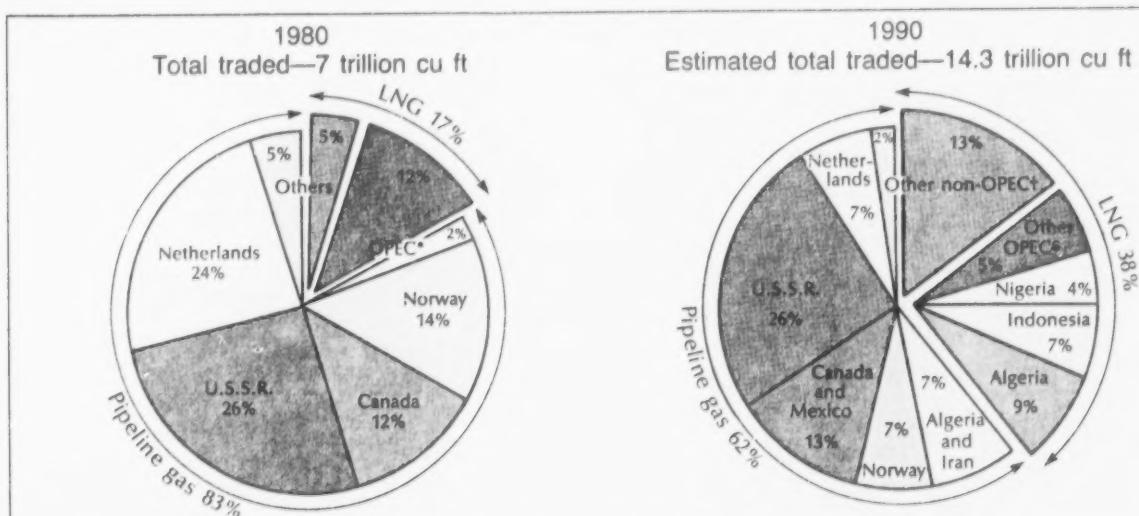
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Source: OPEC Bulletin

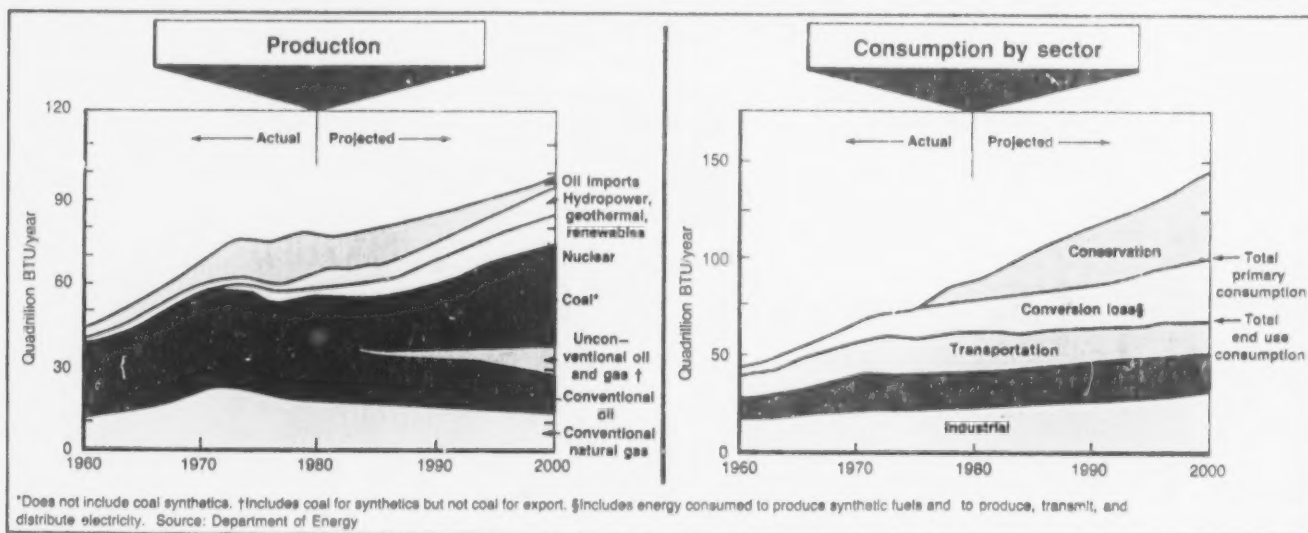
A look at key gas exporters of the world

17

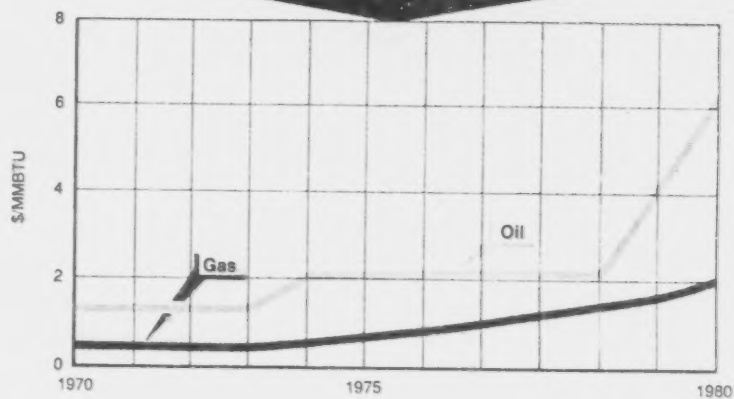


*Algeria, Abu Dhabi, Indonesia, Iran, and Libya. †Includes Australia, Brunei, Malaysia, Trinidad, and others. ‡Abu Dhabi, Libya, and Qatar.
Source: Shell International Gas Ltd.

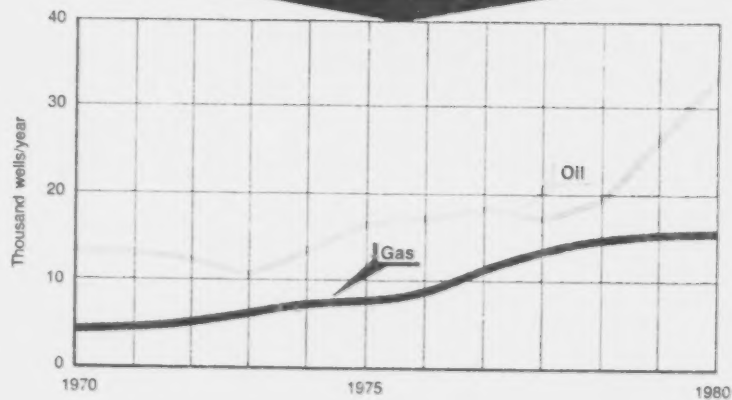
Outlook under Reagan's National Energy Policy Plan



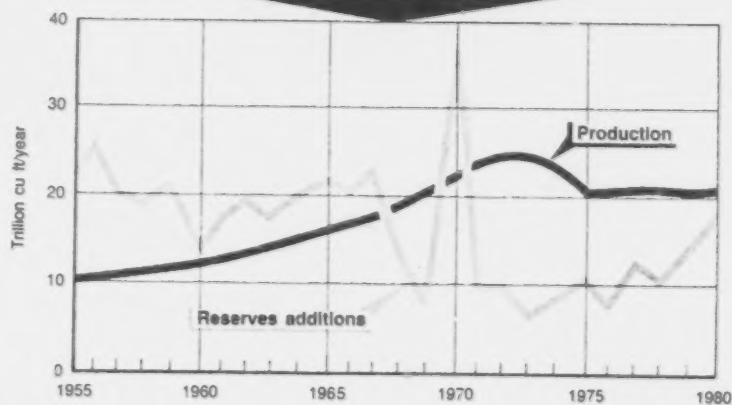
Gas prices vs. oil prices*



The oil, gas well completion gap



Gas production, reserves additions

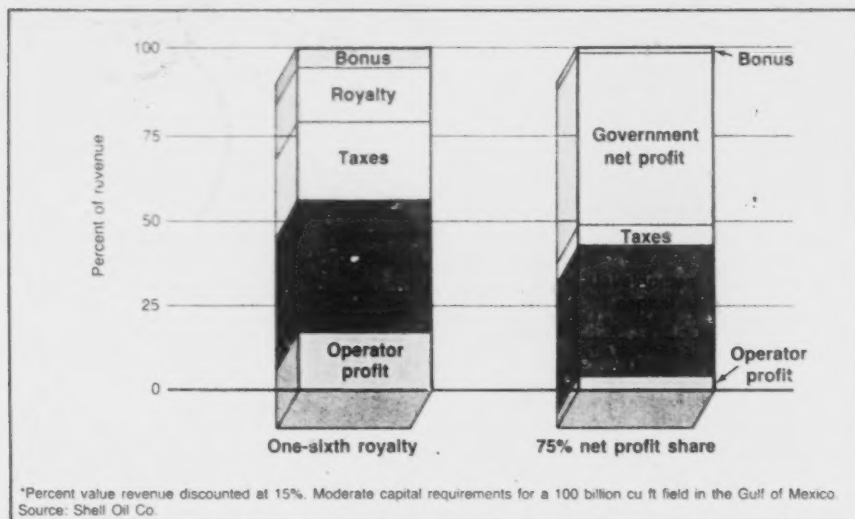


*1981 dollars.
Source: Standard Oil Co. (Ind.)

34

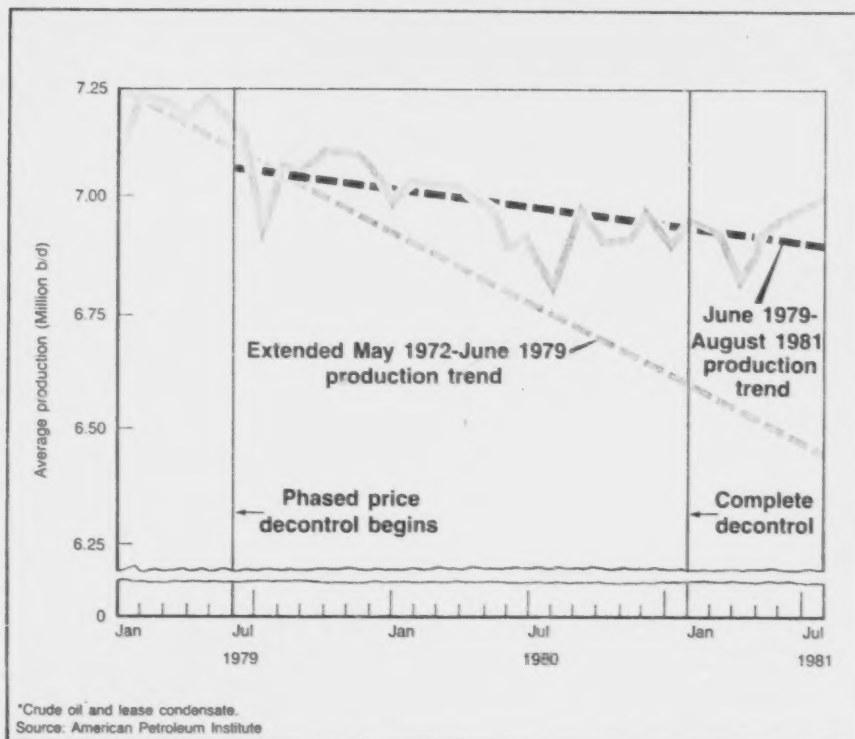
How government, industry revenues compare*

4



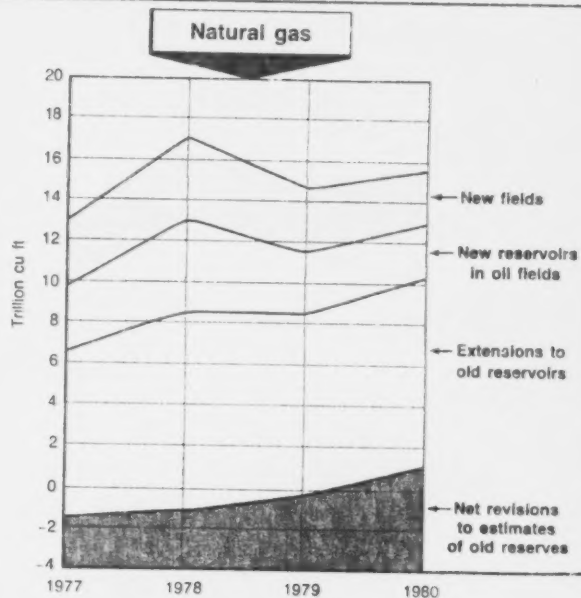
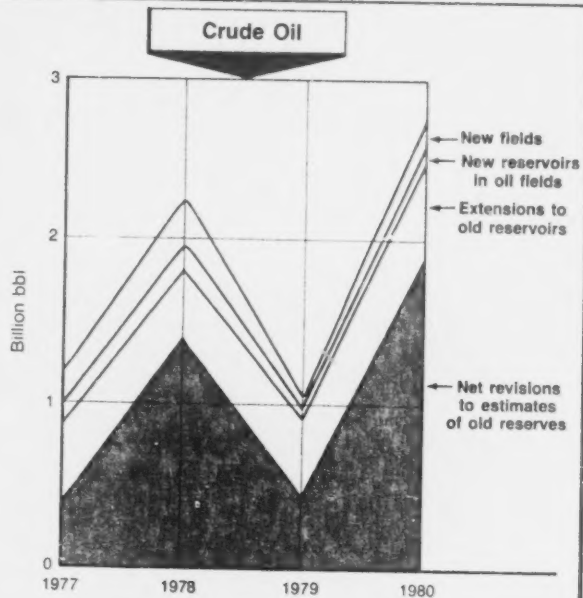
How Lower 48 production decline eased*

5



What accounts for additions to U.S. oil and gas reserves*

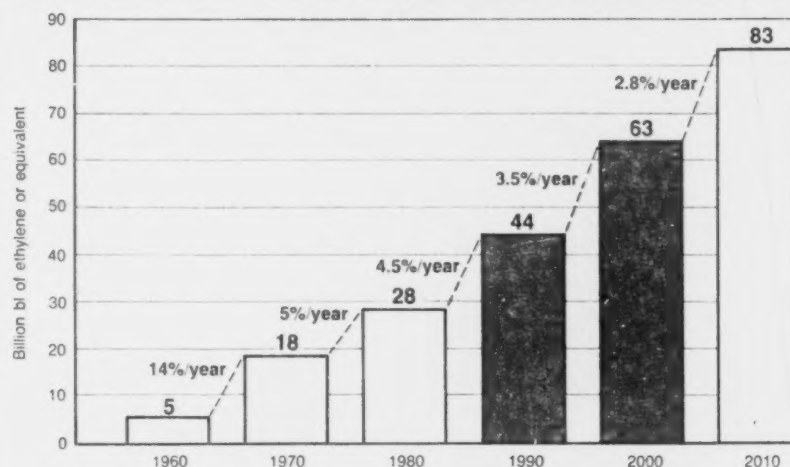
6



*Excludes corrections and adjustments.
Source: Energy Information Administration

How U.S. ethylene demand could increase

7



Source: Shell Oil Co.

Table 1

Breakout of oil, gas supply under NEPP

	1980 Actual	2000 Mid Range	1980 Low Range	2000 High Range
Oil Production				
Conventional oil*	8.6	7.6	7.2-8.2	7
Enhanced oil†		0.2	0.1-0.4	0.6
Shale oil			0.2	0.1-0.4
NGL	1.5	1.3	1.2-1.4	1.1
Subtotal	10.1	9.1	8.6-9.8	8.9
Ranges§				8.1-10.2
Synthetic coal liquids				0.2
				0.1-0.4
Production subtotal	10.1	9.1	8.6-9.8	9.1
Ranges§				8.3-10.4
Refinery gain	0.5	0.5	0.4-0.5	0.5
Net imports¶	6.3	6.3	4.7-8.5	4.8
				1.9-7.1
Total supply	16.9	15.9	14.4	12.3
Gas Production				
Conventional Lower 48*	19.3	17.3	16.3-18.9	16.3
North Alaska				0.8
				0.7-0.9
Subtotal	19.3	17.3	16.3-18.9	17.1
Unconventional,‡		0.4	0.3-0.5	1.3
				1-1.6
Subtotal	19.3	17.7	16.7-19.3	18.4
Ranges§				15.6-20.6
Gas synthetics×	0.2	0.2	0.1-0.3	0.5
				0.3-0.6
Total domestic production	19.5	17.9	16.9-19.5	18.9
Ranges§				16.1-21.1
Net imports	1	2	1-3	2
				1-3
Total supply	20.5	19.9	20.9	21

*Includes South Alaska production of about 200,000 b/d in 1980, increasing to 400,000 b/d by 2000, and North Alaska production of 1.5 million b/d in 1980 and 1.8 million b/d in 2000. †Incremental tertiary production. California heavy oil currently produced with thermal recovery techniques included under conventional Lower 48. §Ranges on totals don't equal the sum of ranges for each category because of the low likelihood that all categories would simultaneously equal their low or high value. ¶Net U.S. oil imports, excluding Strategic Petroleum Reserve and imports by U.S. territories. ‡Includes South Alaska production of about 200 billion cu ft/year in 1980, increasing to 500 billion cu ft/year by 2000. §Incremental production from tight sands, Devonian shale, coal bed methane, and geopressurized methane. Tight sands production from previously develop areas (900 billion cu ft in 1980) included under conventional Lower 48. ×Synthetic gas from oil and coal.

Source: Department of Energy

What's ahead for U.S. energy prices under NEPP*

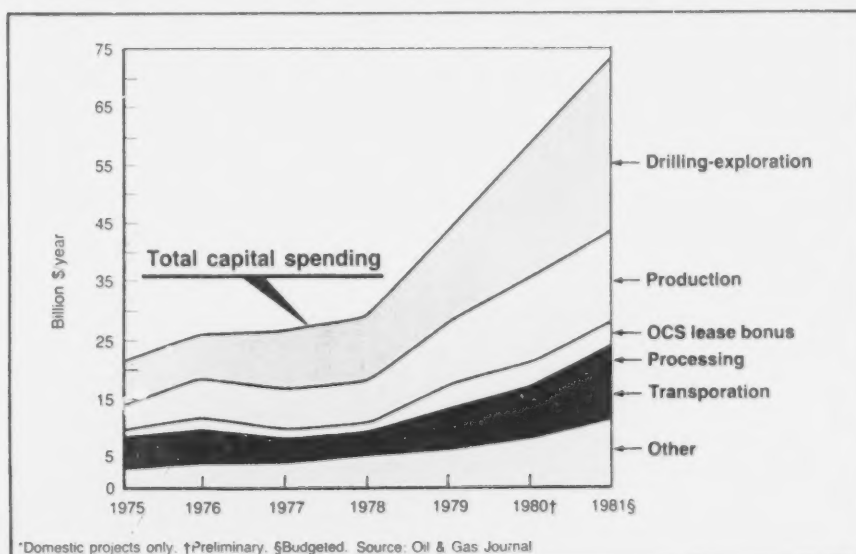
	Estimated 1980	1985		Projected 1990		2000	
		Midrange	Range	Midrange	Range	Midrange	Range
World oil price (\$/bbl)†	37	44	37-50	52	41-66	70	50-95
Resource prices							
Refined crude oil (\$/bbl)	30.65	44	37.40-50	52	41.68	70	50-95
Average wellhead gas price (\$/Mcf)	1.64	5.84	4.80-6.10	6.69	5.50-8.50	8.38	6.70-9.80
Average minemouth coal price (\$/ton)	27.59	31.76	30.70-34.90	33.42	32.90-38.20	38.45	34.80-45.30
Delivered prices							
Residential sector							
Distillates (\$/gal)	1.07	1.42	1.20-1.60	1.64	1.30-2.20	2.14	1.50-2.90
Liquid gases (\$/gal)	0.63	0.85	0.60-1.10	0.98	0.70-1.40	1.27	0.80-2.00
Natural gas (\$/Mcf)	4.30	7.54	6.60-8.80	8.97	7.40-11.10	10.70	8.70-12.40
Electricity (¢/kw-hr)	5.89	6.07	5.70-6.30	6.79	6.20-7.40	7.78	6.90-8.50
Commercial sector							
Distillate (\$/gal)	0.96	1.30	1.10-1.50	1.51	1.20-2	1.98	1.40-2.70
Residual (\$/bbl)	29.67	47.32	37-58.10	55.49	40.30-78.10	73.82	48.70-108.30
Liquid gases (\$/gal)	0.62	0.84	0.60-1.10	0.97	0.70-1.40	1.28	0.80-2
Natural gas (\$/Mcf)	3.51	7.60	6.50-8.50	8.65	7.10-10.80	10.39	8.40-12.10
Electricity (¢/kw-hr)	6.02	6.35	6.10-6.50	7.13	6.70-7.60	8.26	7.70-8.70
Industrial sector							
Distillate (\$/gal)	0.95	1.28	1.10-1.15	1.48	1.20-2	1.93	1.40-2.70
Residual (\$/bbl)	29.67	45.77	35.20-57	53.64	38.40-76.50	71.24	46.30-106
Liquid gases (\$/gal)	0.62	0.84	0.60-1.10	0.97	0.70-1.40	1.28	0.80-2
Natural gas (\$/Mcf)	2.90	7.10	6.10-8	8.15	6.70-10.20	9.91	8-11.60
Coal (\$/ton)	41.03	42.90	30.90-56.70	46.34	33.50-63.50	52.72	35.40-73.20
Electricity (¢/kw-hr)	4.06	4.47	4.20-4.70	5.19	4.60-5.70	6.14	5.30-6.90
Transportation sector							
Gasoline (\$/gal)	1.34	1.65	1.40-2	1.84	1.40-2.50	2.26	1.60-3.20
Distillate (\$/gal)§	0.96	1.44	1.10-1.60	1.67	1.20-1.90	2.19	1.40-2.50
Residual (\$/bbl)	29.67	45.77	35.20-57	53.64	38.40-76.50	71.24	46.30-106
Jet fuel (\$/gal)§	0.99	1.33	1-1.60	1.56	1.10-2.20	2.08	1.40-3.10

*In 1981 dollars. 1981 dollars assumed to equal 1.009 times 1980 dollars. †U.S. average refiner acquisition cost of imported crude oil.

§Excludes taxes.

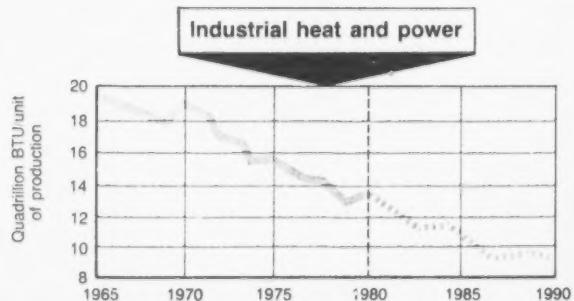
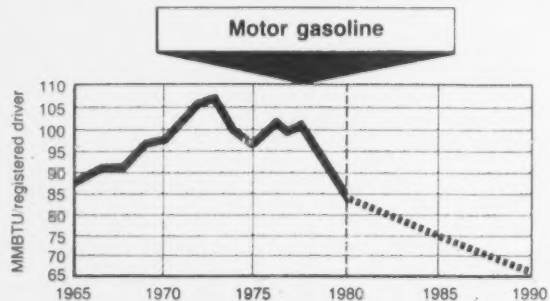
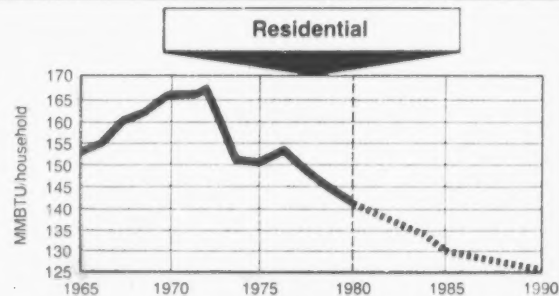
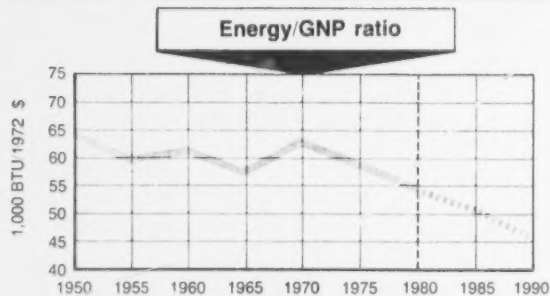
Source: Department of Energy

How U.S. industry capital outlay is climbing*





How the U.S. is conserving energy



Source: Shell Oil Co.

58

Table 3

How U.S. new field discoveries rank by size, 1973-80

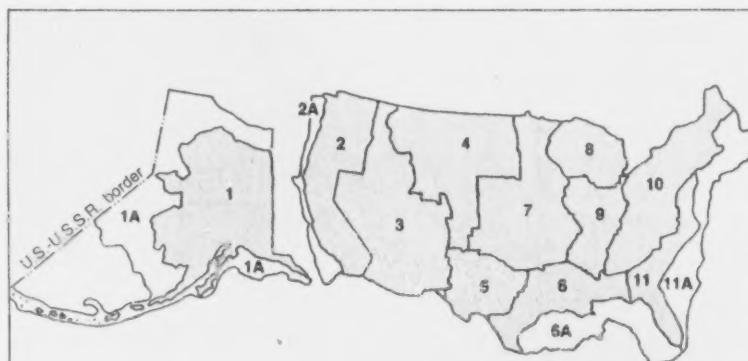
Dis- covery year	Number and size of fields found*						Total fields	Percent of A-D fields in total fields	
	A	B	C	D	Subtotal	E			F
1973	0(0)<2>	1(8)<8>	7 (9)<13>	84(88)<80>	92(105)<103>	608 (525)<482>	1(23)<0>	701(653)<505>	13.1 (16.1)<17.6>
1974	0(0)<0>	1(1)<2>	7 (3)<6>	88(81)<87>	96(85)<95>	707 (640)<583>	2(7)<0>	805(732)<678>	11.9(11.6)<14.0>
1975	3(4)	1(1)	6(5)	100(95)	110(105)	759(712)	7(10)	876(827)	12.6(12.7)
1976	1(2)	0(0)	3(9)	115(105)	119(116)	867(782)	0(0)	986(898)	12.1(12.9)
1977	0(3)	1(2)	3(4)	124(111)	128(120)	874(751)	2(0)	1004(871)	12.7(13.8)
1978†	1	0	5	93	99	879	5	983	10.1
1979	0	1	8	34	43	1,114	5	1,162	3.7
1980	0	1	7	31	39	1,301	0	1,340	2.9

*Classifications used for total ultimate reserves for oil and natural gas: A fields, more than 50 million bbl or 300 billion cu ft; B fields, 25-50 million bbl or 150-300 billion cu ft; C fields, 10-25 million bbl or 60-150 billion cu ft; D fields, 1-10 million bbl or 6-60 billion cu ft; E fields less than 1 million bbl or 6 billion cu ft; F fields, abandoned as nonprofitable. †Correction to original report. () Revised estimate as result of 3 year review. <> Revised estimate as result of 6 year review.

Source: American Association of Petroleum Geologists

72
Where U.S. undiscovered resources lie

3



	Crude oil —Billion bbl—			Natural Gas —Trillion cu ft—	
	Low	High	Mean*	High	Mean*
Onshore regions					
1 Alaska	2.5	14.6	6.9	62.3	36.6
2 Pacific Coast	2.1	7.9	4.4	24.9	14.7
3 Colorado Plateau & Basin and Range	6.9	25.9	14.2	142.4	90.1
4 Rocky Mountains and northern Great Plains	6.0	14.0	9.4	69.0	45.8
5 West Texas and eastern New Mexico	2.7	9.4	5.4	75.2	42.8
6 Gulf Coast	3.6	12.6	7.1	249.1	124.4
7 Midcontinent	2.3	7.7	4.4	80.8	44.5
8 Michigan basin	0.3	2.7	1.1	10.9	5.1
9 Eastern Interior	0.3	1.9	0.9	5.0	2.7
10 Appalachians	0.1	1.6	0.6	45.8	20.1
11 Atlantic Coast	0.1	0.8	0.3	0.4	0.1
Total onshore	41.7	71.0	54.6	567.9	426.9
Offshore regions (Shelf and Slope)					
1A Alaska†	4.6	24.2	12.3	109.6	61.6
2A Pacific Coast	1.7	7.9	3.8	13.8	6.9
6A Gulf of Mexico	3.1	11.1	6.5	114.2	71.9
11A Atlantic Coast	1.1	12.9	5.4	42.8	23.6
Total offshore	16.9	43.5	28.0	230.6	167.0
Total U.S.	64.3	105.1	82.6	739.3	593.9
Lower 48 onshore					
	36.1	62.0	47.4	525.9	390.3
Lower 48 offshore					
	8.7	25.1	15.8	148.2	102.4

*May not add due to rounding. †Includes volumes considered recoverable only if technology permits their exploitation beneath Arctic pack ice, a condition not yet met.
Source: U.S. Geological Survey

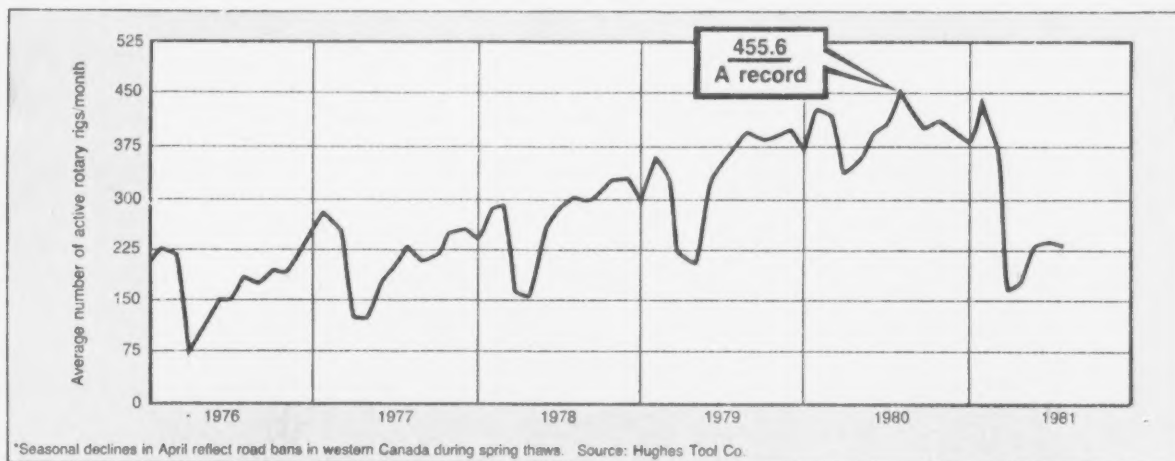
Table 1
Canada old oil prices

Date	Increase \$/bbl	New Price
Oct. 1, 1981	2.50	21.25
Jan. 1, 1982	2.25	23.50
July 1, 1982	2.25	25.75
Jan. 1, 1983	4.00	29.75
July 1, 1983	4.00	33.75
Jan. 1, 1984	4.00	37.75
July 1, 1984	4.00	41.75
Jan. 1, 1985	4.00	45.75
July 1, 1985	4.00	49.75
Jan. 1, 1986	4.00	53.75
July 1, 1986	4.00	57.75

Source: National Energy Board



How Canadian drilling rose and fell*



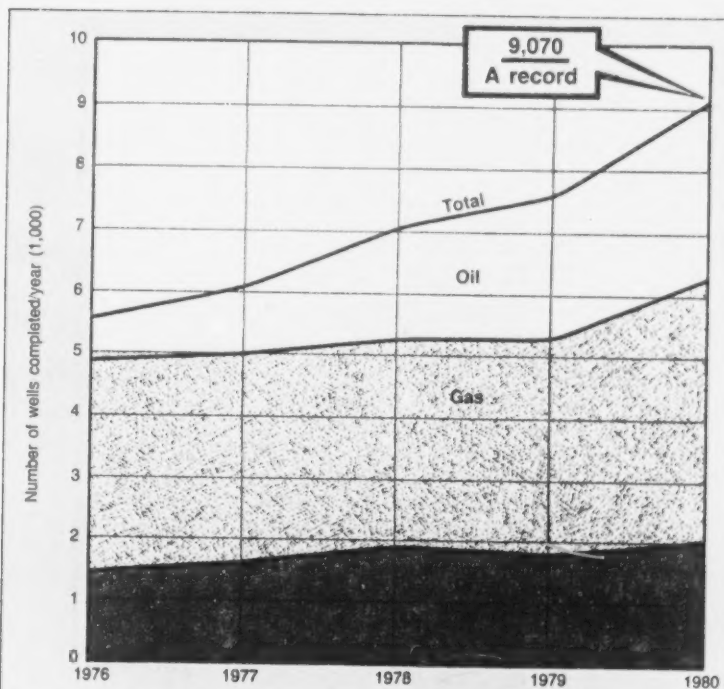
80

Table 2
Prices for Canadian new oil

Dates	Delivered at Montreal	Estimated wellhead
	\$ bbl	
Jan. 1, 1982	47.30	45.92
July 1, 1982	50.60	49.22
Jan. 1, 1983	54.50	53.06
July 1, 1982	58.50	57.06
Jan. 1, 1984	61.70	60.18
July 1, 1984	65.00	63.48
Jan. 1, 1985	68.40	66.83
July 1, 1985	71.80	70.23
Jan. 1, 1986	75.70	74.08
July 1, 1986	79.10	77.48

Source: National Energy Board

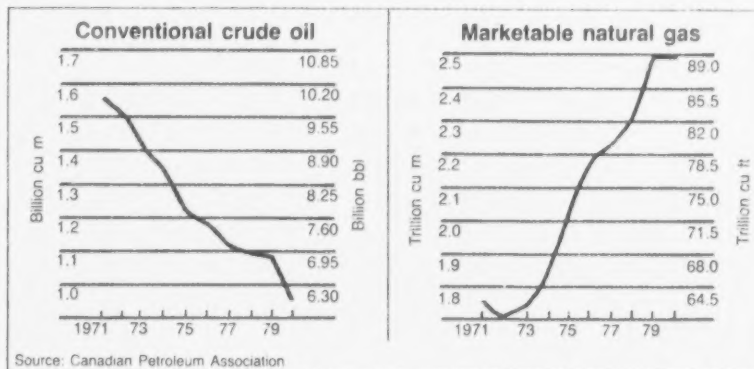
The buildup in Canadian well completions*



*Excludes 113 wells suspended during 1976-80. Source: Canadian Petroleum Association

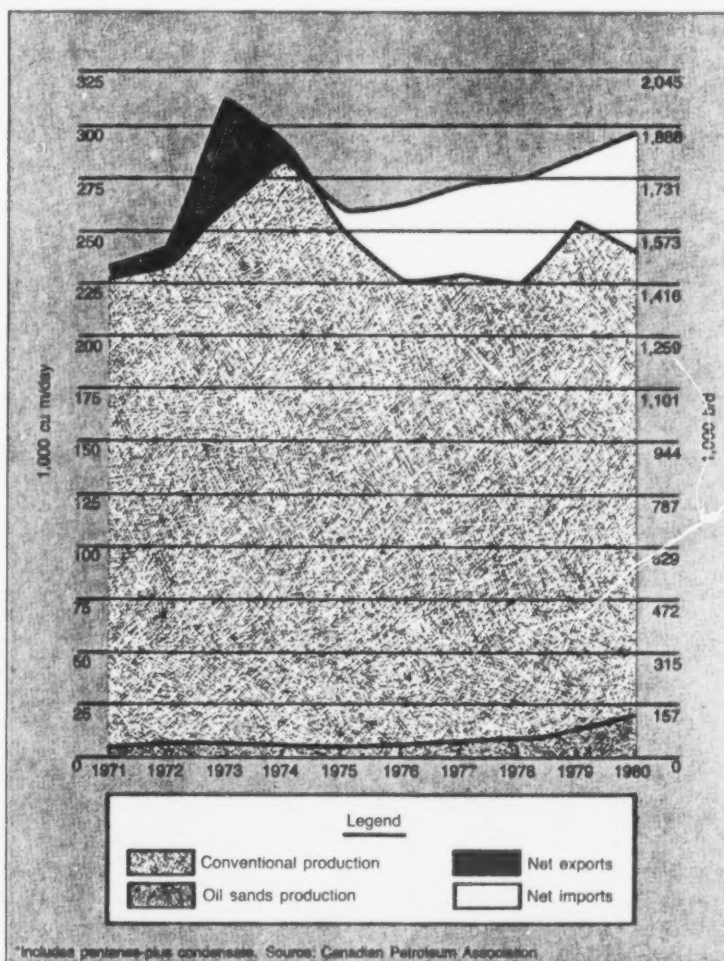
A look at Canada's oil and gas reserves

3



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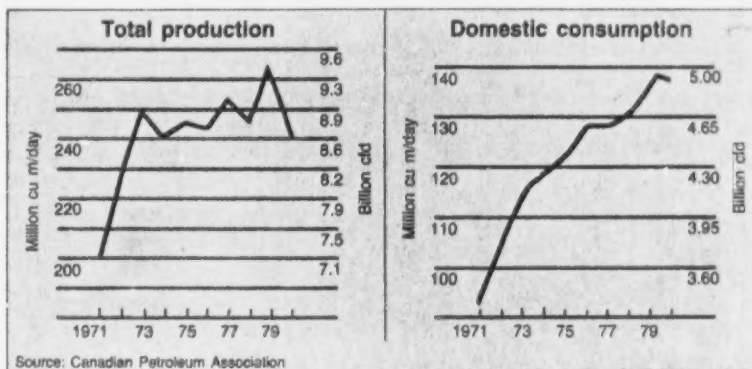
Canada's oil production, consumption*



82

Canada's gas production, consumption

5



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Table 3

GSC view of Canadian resources, discoveries

Region	Resources			
	Average expectation	Highly speculative	Average expectation	Highly speculative
	Billion bbl		Trillion cu ft	
Western Canada	19.2	21.8	159	171
Mackenzie-Beaufort	9.4	12.3	112	147
Arctic Islands	4.3	7.6	87	138
East Coast	7.4	12.7	72	125

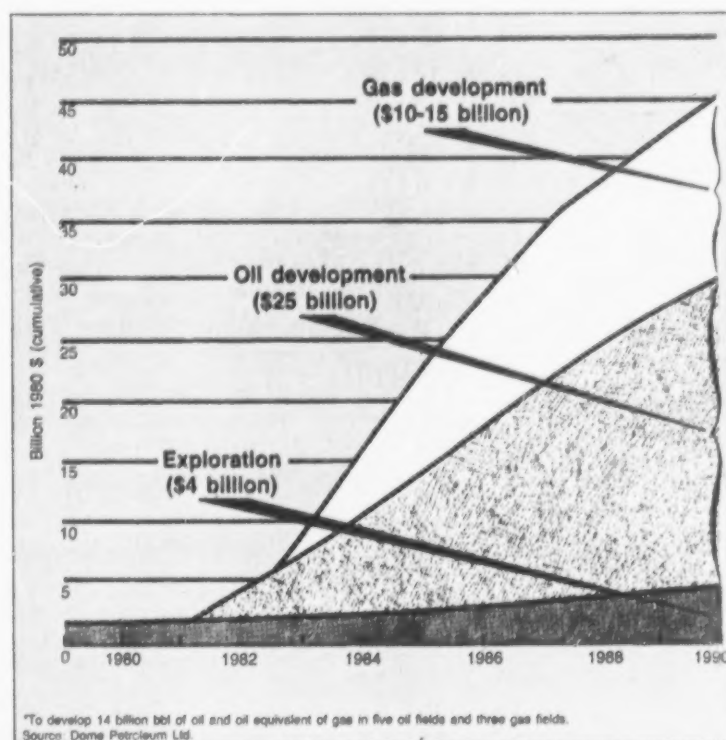
Projection for 1980s

Region	Number of exploratory wells	Oil discovered (Billion bbl)	Gas discovered (Trillion cu ft)
Western Canada	22,000	2.6-3.3	35-38
Mackenzie-Beaufort	75	2.4-2.6	29-40
Arctic Islands	100	0.4-0.5	19-32
East Coast	150	2.4-3.6	20-31

Source: Geological Survey of Canada

Beaufort Sea investment requirements*

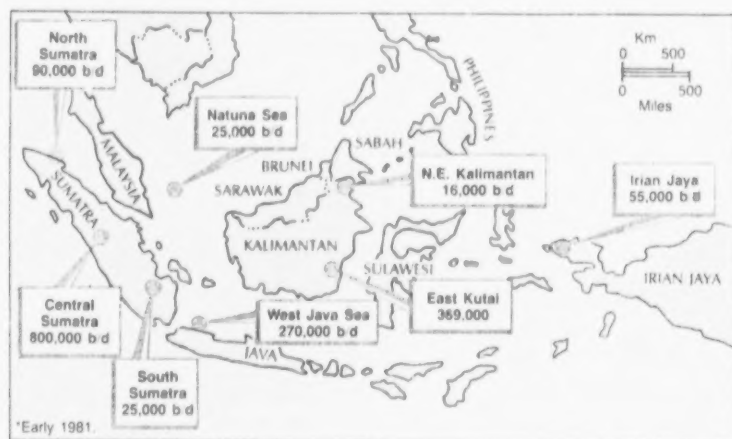
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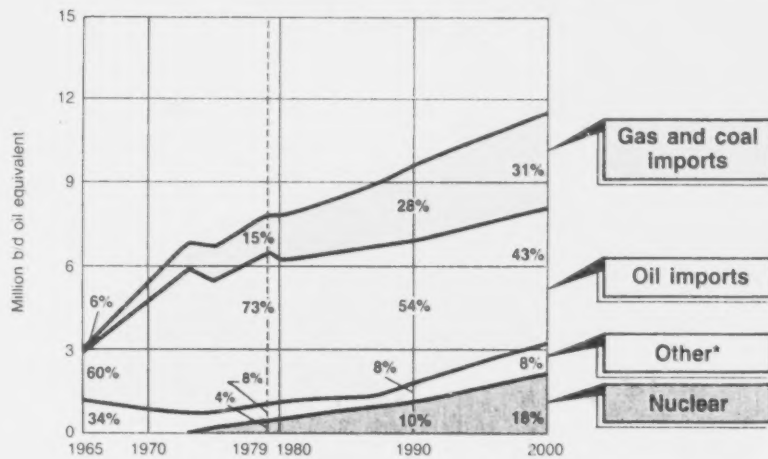
192

Where Indonesia's oil is produced*



194

Outlook for Japan's energy supply/demand



*Hydropower and domestic fossil fuels. Source: Exxon Corp.

305

Principal oil basins and fields

Basin	Oil field	Province	Estimated 1980 production ('000 b/d)	Reserves Produced, proved & probable (million barrels)	Total potential (million barrels)
Baodign	Renqiu He Jian/Yan Lin/ Ba Xian/ Yong Qing	Hebei	214	na	na
Bohai	Shengli	Hebei	na	na	na
	Dagang	Shandong	400	4,500	6,750
	Chengbei	Tianjin	50		
		Offshore			
	Haisi	Tianjin	3	1,500	5,500
Huanghai (Yellow Sea) & Nanhai (South China Sea)		Offshore	2		
		Shandong, Jiangsu, Guangdong & Hainan is.	—	3,357	47,500
Jiangnan	Jiangnan/ Shashi	Hubei	50	500	1,000
Jiangsu	Zhenwu	Jiangsu	na	na	na
Jiuquan/Yumen	Jiuquan	Gansu	12	615	1,100
Junggar	Karamay	Xinjiang	70	877	4,900
	Dushanzi	Xinjiang	10	na	na
Kaifeng Ordos	Urho	Xinjiang	na	na	na
	Dongpu	Henan	na	na	na
	Yenchang	Shaanxi	2	na	na
	Changqing	Gansu/Ning- xia/Shaanxi	na	na	na
Qaidam	Lenghu	Qinghai	na	1,700	5,300
	Qaidam	Qinghai	na	na	na
Sichuan Sungliao	Zhangjiachang	Sichuan	20	1,060	3,000
	Daing	Heilongjiang	1,030		
	Fuyu	Jilin	26	5,000	11,000
	Liaohe/Panshan	Liaoning	106		
Tarim	Karata	Xinjiang	na		
	Kekkeya	Xinjiang	na	50	5,050
	Kucha	Xinjiang	na		

na: not available.

Sources: Production: mainly official. Reserves: Meyerhoff & Willums report for "Asian Profile" 1980.



A CHINESE-JAPANESE crew (photo above) check out some prospecting equipment. Chinese and Japanese technicians (at left) test the quality of the oil from a new well.

Principal refineries

Capacities in million tons year (where known)

Name	Province autonomous region	Approximate capacity	Name	Province autonomous region	Approximate capacity
Anqing	Anhui	2.0	Karamay	Xinjiang	1.0 - 3.3
Anshan	Liaoning	2.5 - 4.5	Lanzhou	Gansu	2.5
Beijing	—	3.5 - 8.5	Lenghu	Gansu	0.9 - 1.1
Changling	Hunan	3.5	Liaoning No. 6	Liaoning	—*
Chongqing	Sichuan	1.0 - 2.5	Luzhou	Sichuan	—
Dagang	Kebei	1.5 - 2.5	Mangyai	Gansu	—
Dali	Shaanxi	—	Maoming	Guangdong	3.7
Dalian No. 7	Liaoning	3.5 - 5.5*	Nanjing	Jiangsu	3.0 - 6.0
Daqing	Heilongjiang	5.0 - 7.5	Nanzhong	Sichuan	0.3 - 0.8
Dushanzi	Xinjiang	0.5 - 2.0	Qianguo	Jilin	—
Fushun No. 1	Liaoning	4.0 - 6.5*	Shanghai	—	4.0 - 11.0
Fushun No. 2	Liaoning	4.3*	Shengli	Shandong	3.5 - 5.5
Fushun No. 4	Liaoning	2.0*	Taizhou	Jiangsu	—
Fushun No. 7	Liaoning	2.0*	Tianjin	Hebei	1.3 - 4.0
Fuyu	Jilin	0.4 - 2.0	Turfan	Xinjiang	0.5
Guangzhou	Guangdong	0.7	Urumqi	Xinjiang	1.5
Hangzhou	Zhejiang	1.0 - 1.3	Wuhan	Hubei	2.5 - 5.0
Harbin	Heilongjiang	0.5	Yanchang	Shaanxi	0.1 - 0.5
Jilin	Jilin	2.5	Yinquan	Ningxia	—
Jinxi	Liaoning	3.5 - 6.5*	Yuzhuanzi	Qinghai	0.3 - 0.5
Jinzhou	Liaoning	1.5*	Yumen	Gansu	1.0 - 4.0
Jiujiang	Jiangxi	2.0	Zhejiang	Zhejiang	2.5

*It was officially reported in 1980 that the six "large" refineries in Liaoning Province had a combined capacity of 23 million tons/year.

Note: The Far Eastern Economic Review of Mar. 6, 1981, lists other major refineries (1.0 - 5.0 million tons/year) at Baoding, Bhengdu, Jinan, Jingmen, Linxiang, Qingdao, Qinghuangdao, Renqiu, Shijiazhuang, Xian, Zhanjiang, Zhengzhou and Zhenhai, plus minor refineries at 24 other locations.

Crude oil production

1907-48

1970-1948	—	20,294
1949	2.4	21,177
1950	4.0	22,637
1951	6.1	24,864
1952	8.7	28,047
1953	12.4	32,587
1954	15.8	38,347
1955	19.3	45,399
1956	23.2	53,889
1957	29.2	64,532
1958	45.3	81,059
1959	74.0	108,069
1960	109.7	148,219
1961	120.0	192,019
1962	132.0	240,199
1963	142.0	292,029
1964	171.5	354,809
1965	228.0	438,029
1966	290.0	543,879
1967	224.0	625,639
1968	313.1	740,249
1969	428.0	896,469
1970	604.0	1,116,929
1971	768.0	1,397,249
1972	889.6	1,722,829
1973	1,070.0	2,113,379
1974	1,284.0	2,582,039
1975	1,549.0	3,144,139
1976	1,735.2	3,779,239
1977	1,872.8	4,462,811
1978	2,081.0	5,222,376
1979	2,123.0	5,997,271
1980	2,113.2	6,770,706
1981	2,020.3	7,322,250

(first nine months)

Note: Includes shale oil and oil from coal.

Sources: 1907-1959, 1976-1981: State Statistical Bureau. 1960-1975: Estimates based primarily on officially disclosed growth rates. Converted from tons using ratio of 7.3 bbl/ton.

Chinese award



Natural gas production

1976	10.0
1977	12.48
1978	13.73
1979	14.51
1980	14.27
1981 (first half)	6.13

Note: Includes only nonassociated gas. Cedigas figures for associated and non-associated gas production are: 1979, 21.70 bcm; 1980, 20.80 bcm.

Sources: 1976-1978: Petroleum Economist estimates. 1979-1980: State Statistical Bureau.

Prospects off China

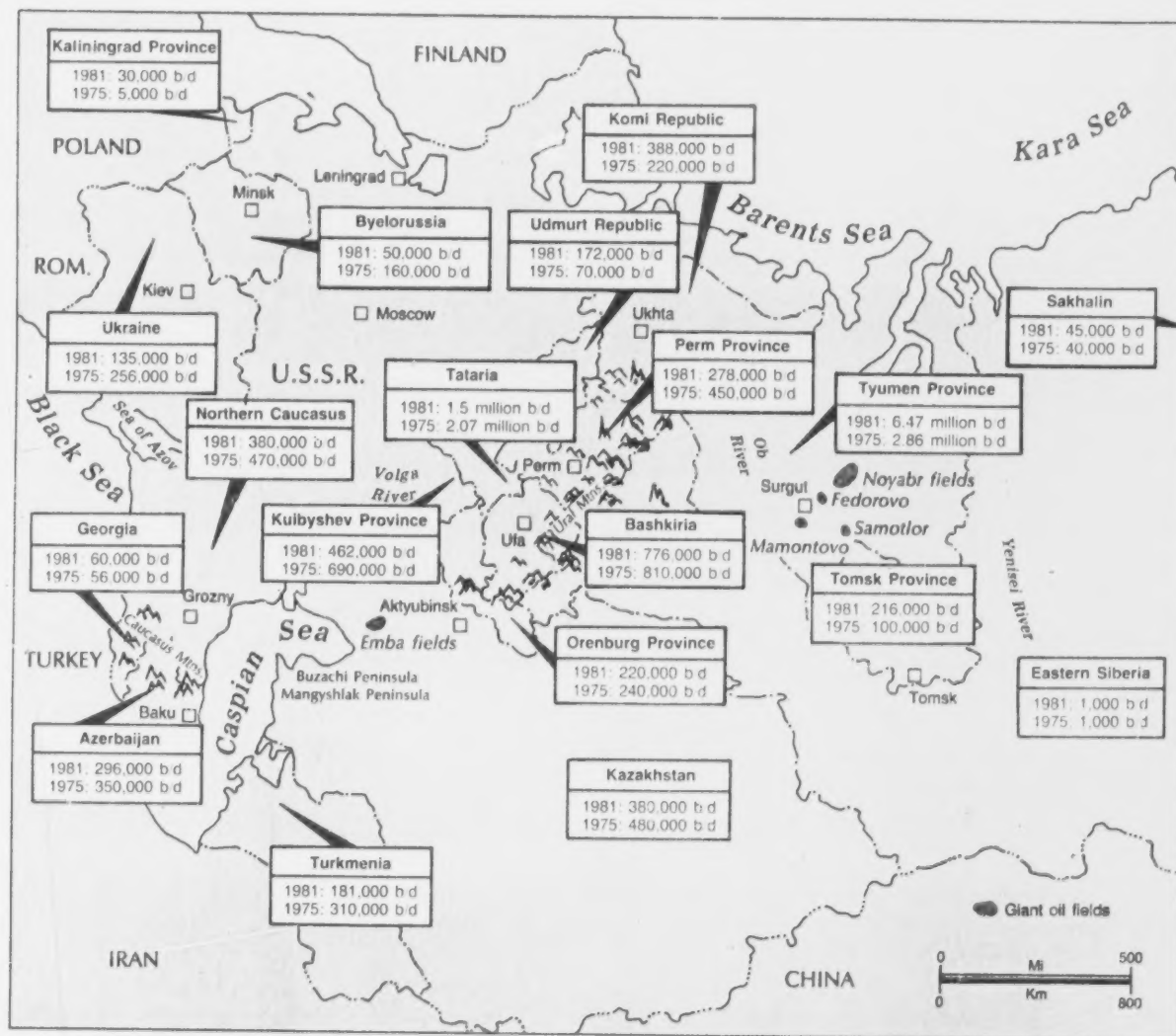


Energy production, 1976-81

Crude oil (million tons)	87.00	93.64	104.05	106.15	105.95	50.10
Nonassociated gas (billion cu m)	10.20*	12.48*	13.73*	14.51	14.27	6.13
Coal (million tons)	487.00	550.00	618.00	635.00	620.00	na
Electricity (billion kh)	203.00	223.40	256.55	281.95	297.1	na

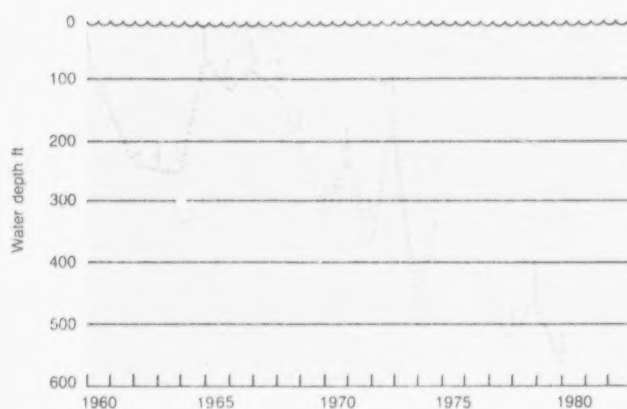
*Estimated. All other figures from State Statistical Bureau.

Where the Soviet Union produces its oil



Offshore action around the world

Depth range of subsea completions, worldwide



(by field)

Country, field	No. of wells	First 6 mo. avg. b/d 1980	Discovery date	Country, field	No. of wells	6 mo. avg. b/d 1980	Discovery date
ABU DHABI				EGYPT			
Arzanah	8	22,000	1973	El Morgan			1965
Abu Al Bukhoosh	20	75,000	1969	GS-195	4	29,712	1978
Mubarras	31	22,000	1971	GS-382	3	8,964	1977
El Bundug	—	—	1965	July	24	47,967	1973
Umm Shaif	—	250,000	1958	Ramadan	14	100,738	1974
Upper Zakum	—	48,000	1964	SG-300	2	6,260	1976
Lower Zakum	—	200,000	1964	Shoab Ali	12	18,047	1978
				Belayim Marine	29	64,000	1961
ANGOLA/CABINDA				GABON			
Erva	1	547	1969	Anguille**	—	12,130	1962
Kambala	1	1,606	1971	Anguille NE**	—	5,357	1969
Kungulo	9	7,817	1975	Anguille NNE**	—	875	1971
Limba	10	19,376	1969	Batanga**	—	216	1960
Livuite	1	633	1979	Barbier**	—	15,337	1974
Malongo N.	57	27,591	1966	Breme**	—	12,771	1976
Malongo A.	30	9,948	1966	Clairette**	—	480	1957
Malongo W.	41	27,922	1969	Doree**	—	614	1974
Cuntala	1	1,519	1978	Girelle**	—	5,914	
				Gonelle**	—	5,090	1976
AUSTRALIA				Grodin**	—	28,051	1973
Barracouta	2	1,966	1968	Mandaros**	—	15,139	1974
Cobia	1	1,502	1972	Olende**	—	1,104	1976
Halibut	19	65,784	1967	P. G. S. Marine**	—	1,964	1978
Kingfish	42	147,471	1967	Port Gentil Ocean**	—	1,653	1964
Mackerel	15	101,522	1969	Tchengue Ocean**	—	410	1963
Tuna	7	4,963	1968	Torpille**	—	8,331	1971
				Lucina-Marine	9	8,405	1971
BRAZIL				INDIA			
D. Joao Mar	404	8,177	1947	Bombay High			1974
Dourado	4	327	1970				
Guaricema	24	6,648	1968	INDONESIA			
Ubarana	21	8,762	1973	Ardjuna	123	119,130	1969
Aguilha	7	5,397	1975	Arimbi	11	7,096	1972
Enchova	4	12,781	1976	Bekapai	31	36,685	1972
Cacao	3	2,862	1978	Handil	74	163,621	1974
Garoupa	3	6,120	1974	Attaka	63	95,070	1970
Namorado	4	11,510	1975	Melahin	6	1,583	1972
Camurim	21	3,019	1971	Kerindingan	8	931	1972
Curima	3	1,088	1978	Sepinggan	12	9,525	1973
Faz. Cedro	16	1,491	1972	Yakin	14	1,918	1976
				Udang	7	9,825	1974
BRUNEI				Cinta			1970
Ampa S.W.	178	61,917	1963	Gita			1972
Champion	150	81,431	1970	Kitty			1973
Fairley	39	19,733	1969	Nora	114	96,237	1973
Fairley-Baram	5	3,055	1963	Rama			1974
Magpie	9	21,177	1975	Selatan			1971
				Zelda			1971
CAMEROON				IRAN			
Betiki	12	6,460	1972	Bahregansar			1960
Ekoundou S.	13	11,570	1975	Hendijan			1968
Kole	14	11,340	1974	Nowruz			1966
Kombo Centre	16	26,400	1976	Rakhsh			1969
				Rostam			1966
CHILE				Ardeshir			1969
Ostion OS-1			1977	Cyrus			1962
Posesion PO-2			1977	Darius			1961
Spiteful SP-1	31	17,429	1978	Fereidoon			1966
Spiteful SP-2			1978	Sassan			1965
				ITALY			
CONGO				Gela	79	10,022	1956
Emeraude	112	27,000	1969	Santa Maria "A" Mare	7	5,110	1974
				JAPAN			
DENMARK				Aga-Okii	24	1,439	1972
Dan	19	6,630	1971				
DIVIDED ZONE				MALAYSIA			
Khafji	121	396,000	1961	Bekok			1976
Hout	26	7,000	1969	Pulai	56	110,000	1973
				Tapis			1975
DUBAI				Tembungo			1971
Fateh	46	151,712	1966	Bakau	3	1,287	
S.W. Fateh	34	182,165	1970	Baram	33	8,173	1963
Falah	7	9,479	1972	Baronia	40	33,741	1967
Rashid	3	1,589	1973	Betty	9	20,339	1967

Country, field	No. of wells	6 mo. avg. b/d 1980	Discovery date	Country, field	No. of wells	6 mo. avg. b/d 1980	Discovery date
Fairley-Baram	2	1,446	1963	Zuluf	37	561,000	1965
West Lutong	25	10,206	1966	SHARJAH			
Temana	10	5,465	1972	Mubarek	4	10,000	1972
Takau	32	17,148	1966	SPAIN			
Samarang	60	68,365	1972	Amposta Marino North	6	650	1970
South Furious	4	4,050	1974	Casablanca	2	11,950	1975
MEXICO				Castellon B	1	7,600	1972
Arenque	14	9,198	1970	Dorado	3	2,797	1975
Isla de Lobos	3	709	1963	TRINIDAD			
Marsopa	11	3,026	1974	Teak	45	45,359	1972
Atun	33	3,825	1966	Samaan	38	35,159	1972
Bagre	29	8,982	1973	Poui	30	40,623	1974
Cantarell	26	474,492	1976	Soldado	250	40,394	1955
NEW ZEALAND				Galeota	30	3,966	1972
Kapuni	11	3,441	1959	Erington	66	1,005	1908
Maui	7	2,836	1969	TUNISIA			
NIGERIA				Ashtart	14	43,570	—
Delta	27	35,474	1965	UNITED KINGDOM			
Delta South	27	42,187	1965	Montrose	16	26,370	1969
Isan	11	5,136	1970	Thistle	24	106,077	1973
Malu	15	15,483	1969	Forties	50	523,000	1970
Mefa	5	3,985	1965	Ninian	25	207,700	1974
Meji	21	33,431	1965	Statfjord	4	10,262	1974
Merem	50	77,780	1965	Argyll	5	16,623	1971
Okan	62	72,489	1964	Beryl	22	108,900	1972
Parabe/Eko	25	14,647	1968	Claymore	20	84,359	1974
W. Isan	9	14,474	1971	Piper	31	222,385	1973
Adua	9	15,594	1967	Auk	9	13,117	1970
Asabo	11	15,980	1966	Brent	18	137,608	1971
Ekpe	14	23,047	1966	Cormorant South	4	19,586	1972
Ekpe-ww	12	14,934	1977	Dunlin A	7	82,317	1973
Eku	6	4,424	1966	Heather	9	12,488	1973
Enang	23	32,942	1968	UNITED STATES			
Etim	8	22,492	1968	Granite Point	30	4,378	1965
Idoho	5	3,084	1966	McArthur River	71	20,958	1965
Inim	10	21,924	1966	Middle Ground Shoal	40	4,931	1963
Mfem	3	6,195	1967	Prudhoe Bay	233	597,452	1968
Ubit	43	32,070	1968	Dos Cuadras	147	8,044	1969
Unam	4	8,154	1968	Huntington Beach	981	10,368	1920
Utue	7	10,794	1966	Wilmington	2,153	41,316	1932
Pennington	10	7,358	1965	Bay Marchand 2	148	14,444	1949
Middleton	6	3,199	1972	Grand Isle 16	57	2,225	1948
North Apoi	16	41,773	1973	South Pass 24	431	7,050	1950
NORWAY				South Pass 27	235	2,928	1954
Ekofisk	36	218,807	1969	Eugene Island 330	187	16,171	1971
West Ekofisk	10	32,846	1970	Grand Isle 43	220	7,006	1956
Cod	6	71,571	1968	Main Pass 41	111	4,290	1957
Tor	10	75,722	1970	Main Pass 306	98	3,073	1969
Albuskeijell	12	30,588	1972	Mississippi Canyon 194	11	5,023	—
Edda	6	26,876	1972	Ship Shoal 204	58	3,581	1968
Eldfisk	18	118,166	1970	Ship Shoal 207	61	3,318	1967
Statfjord	4	54,238	1974	Ship Shoal 208	93	4,165	1962
PERU				South Pass 61	123	10,409	1968
Humboldt	345	22,086	1960	South Pass 62	81	4,892	1965
Litoral	113	6,727	1955	South Pass 65	56	3,526	1969
Providencia	51	1,021	1967	South Timbalier 21	91	5,146	1965
Other	5	27	—	South Timbalier 135	59	2,123	1956
PHILIPPINES				West Delta 30	176	8,560	1949
South Nido	5	13,800	1977	West Delta 73	85	3,257	1962
QATAR				West Delta 79	80	6,360	—
Bul Hanine	12	147,019	1970	VENEZUELA			
Idd El Shargi	15	19,162	1960	Bachaquero	1,664	311,020	1930
Maydan-Mahzam	17	81,364	1963	Cabimas	618	47,638	1917
SAUDI ARABIA				Lagunillas	3,285	511,116	1926
Abu Safah	18	136,000	1963	Tia Juana	1,991	225,810	1928
Berri	70	531,000	1964	ZAIRE			
Manifa	6	44,000	1957	GCO	7	1,605	1970
Marjan	15	59,000	1967	Mibale	5	17,843	1973
Qatif	30	115,000	1945	Mwambe	2	2,062	1979
Safaniyah	245	1,512,000	1951				

**220 wells for all fields

Offshore daily average crude production
(thousands of bbl)

Country	1980	1979	1978	1977	1976	Change	% Change
Saudi Arabia	2,958.00	2,828.00	2,621.40 π	2,621.40 π	1,694.80 π	+ 130.00	+ 4.39
United Kingdom	1,650.00	1,571.40	1,070.00	760.00*	446.00	+ 78.60	+ 4.76
Abu Dhabi	1,322.01	596.83	590.66	627.00	560.00	+ 725.18	+ 54.85
Venezuela	1,095.58	1,050.00	1,083.50	1,249.80 π	1,677.22 π	+ 45.58	+ 4.16
United States	1,038.09	1,066.00	1,123.50	1,237.80	1,064.00*	- 27.91	- 2.69
Norway	628.81	407.34	356.46	279.72	242.61	+ 221.47	+ 35.22
Nigeria	579.05	543.52	384.37	536.40 π	525.05	+ 35.53	+ 6.14
Indonesia	533.05	374.66	545.24	590.97	425.97	+ 158.39	+ 29.71
Mexico	500.23	430.00	40.20	48.39	45.39	+ 70.23	+ 14.04
Divided Zone	403.00	395.20	240.00 π	165.60	247.10	+ 7.80	+ 1.94
Egypt	390.31	430.00	396.00	399.00	231.12	- 39.69	- 10.17
Dubai	344.95	362.73	362.00	317.04 π	308.34	- 17.78	- 5.15
Australia	323.21	401.00	414.75	430.55	348.00	- 77.79	- 24.07
Malaysia	280.32	271.03	225.00	178.10 π	151.40	+ 9.29	+ 3.31
Qatar	247.55	275.73	260.02	244.34	—	- 28.18	† 11.38
U.S.S.R.	200.00	190.00†	200.00 π	205.00*	220.00*	+ 10.00	+ 5.00
Brunei	192.24	189.61	191.00	223.00	170.17	+ 2.63	+ 1.37
Gabon	177.90	196.00	138.00	183.20	165.92	- 18.10	- 10.17
Trinidad/Tobago	166.51	167.44	175.55	189.31	180.07	- 0.93	- 0.65
Iran	150.00	200.00†	654.50 π	507.40 π	426.54	- 50.00	- 33.33
India	142.14	81.36	61.74	80.00 π	15.00	+ 60.78	+ 42.76
Cabinda	96.96	160.00	94.62	130.50 π	33.61 π	- 63.04	- 65.02
Brazil	73.00	72.00	38.94	28.83	35.42	+ 1.00	+ 1.37
Tunisia	43.57	48.50	45.23	45.53 π	37.00	- 4.43	- 11.32
Spain	31.25	22.18	20.00	23.00	33.33	+ 9.07	+ 29.02
Peru	29.86	29.14	28.92	28.60 π	31.75	+ 0.72	+ 2.41
Congo	27.00	52.00	52.44 π	25.00 π	38.03	- 25.00	- 92.59
Zaire	21.51	20.84	18.96	23.38 π	19.96	+ 0.67	+ 3.11
Sharjah	10.00	12.08	25.44	32.58 π	37.00	- 2.08	- 20.80
Denmark	6.63	12.00	8.50	10.20	8.00	- 5.37	- 81.00
Italy	6.27	4.48	4.31	12.01 π	10.10	+ 1.43	+ 22.81
Ivory Coast	5.80	—	—	—	—	+ 5.80	+ 100.00
Philippines	4.00	26.00	—	—	—	- 22.00	- 550.00
New Zealand	3.16	—	—	—	—	+ 3.16	+ 100.00
China	2.00	2.00	2.00	—	—	-0-	-0-
Ghana	2.00	2.00	5.00	—	—	-0-	-0-
Japan	1.53	0.50	2.50	3.10	3.00	+ 1.03	+ 67.32
TOTALS	13,687.49	12,491.93†	11,480.75	11,436.75	9,431.91	+ 1,195.56	+ 8.73
WORLD TOTAL	59,812.00	62,768.00	60,337.00	56,567.00	57,210.00	- 2,956.00	- 4.94
% OFFSHORE	22.88	20.15	19.02	20.20	16.50		

π Estimate

* Crude and condensate

† Revised Figures

261

Offshore gas production (MMcfd)

Country	1980	1979	1978	1977	1976	Change	% Change
United States	14,703.27	12,937.30	13,983.84	9,804.60	11,864.46	+ 1,766.40	+ 12.01
United Kingdom	3,610.00	3,981.48	3,925.92	3,880.00	13,912.10§	- 371.48	- 9.33
Norway	2,426.00	2,252.79	1,375.00	269.00	560.00**	+ 173.21	+ 7.14
Abu Dhabi	1,434.00	627.00	629.00	615.00	510.0	+ 807.00	+ 56.28
U.S.S.R.	1,255.00	1,161.00	1,064.00	996.00	897.00	+ 64.00	+ 5.22
Netherlands	1,170.00	1,062.33	530.00*	530.00	298.40	+ 107.67	+ 9.20
Brunei	984.80	1,030.00	988.00	—	—	- 45.20	- 4.59
Nigeria	500.00	500.00	220.00*	218.80||	500.00†	- 0 —	- 0 —
Indonesia	440.00	439.28	561.00	621.90	345.66	+ 0.72	+ 0.16
Trinidad/Tobago	420.00	404.40	428.50	344.30	311.20	+ 15.60	+ 3.71
Australia	388.00	504.00	847.00	651.00	293.00	- 116.00	- 29.90
Ireland	125.00	125.00	1.79	—	—	- 0 —	- 0 —
Brazil	100.00	91.38	65.92	25.00*	26.00*	+ 8.62	+ 8.62
New Zealand	84.04	25.18	—	—	—	+ 58.86	+ 70.04
Colombia	64.72	33.00	—	—	—	+ 31.72	+ 49.01
Egypt	57.85	65.00	72.00	—	—	- 7.15	- 12.36
Japan	47.70	35.00	60.00	—	—	+ 12.70	+ 26.62
Mexico	25.00*	22.80	107.90	—	—	+ 2.20	+ 8.80
Italy	22.00	23.00	38.00	—	—	- 1.00	- 4.55
Ghana	8.00	—	—	—	—	+ 8.00	+ 100.00
India	2.67	48.52	3.44	—	—	- 45.85	- 1,717.23
Gabon	0.00	0.00	.60	—	—	- 0 —	- 0 —
Spain	0.00	0.00	850.07	—	—	- 0 —	- 0 —
Saudia Arabia	0.00**	300.00*	300.00*	300.00*	200.00	- 300.00	- 100.00
TOTALS	27,838.05	25,668.46	26,051.98	18,285.60	29,732.82	+ 2069.59	+ 7.46

* Estimate

** Estimate based on oil/gas

π Nigerian Gulf Oil Co. only

§ Decrease caused by difference in reporting procedure

** All gas flared

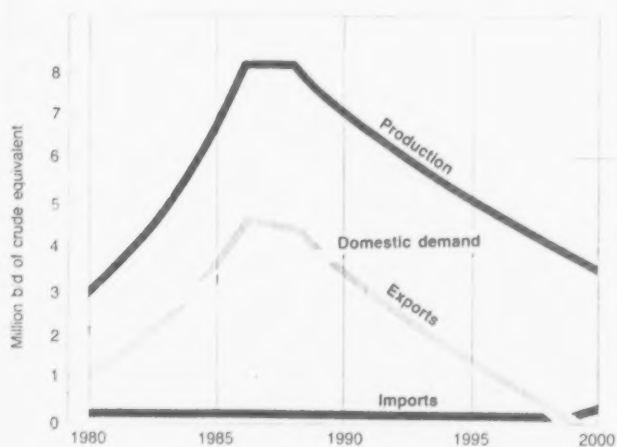
Refining capacity in construction
or engineering*

Refinery	Process	Capacity b/d
Azcapotzalco	High vacuum (visbreaker)	25,000
Cadereyta	Naphtha desulfurization	36,000
	Middistillate desulfurization	50,000
	Catalytic reforming	20,000
	Visbreaking	100,000
	High vacuum (visbreaker)	100,000
Madero	Primary distillation	150,000
	Vacuum distillation	80,000
Minatitlan	Middistillate desulfurization	25,000
	Naphtha desulfurization	25,000
	Catalytic reforming (Hvy naphtha)	20,000
	Visbreaking	50,000
	High vacuum (visbreaker)	50,000
Salina Cruz	Naphtha desulfurization	25,000
	Middistillate desulfurization	50,000
	Catalytic reforming	20,000
	Visbreaking	50,000
	High vacuum (visbreaker)	50,000
	Vacuum distillation	80,000
	Primary distillation	150,000
Tula	Primary distillation	150,000
	Vacuum distillation	80,000
	High vacuum (visbreaker)	40,000

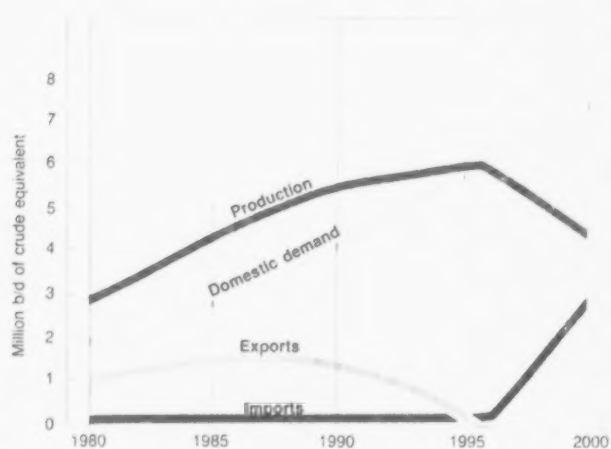
*As of Jan. 1, 1981. Does not include new refinery.

How Mexico could balance current reserves, economic growth*

With weak economic growth**



With steady economic growth***



*Assumes total crude, natural gas, and NGL reserves of 60 billion bbl of crude equivalent. **Non-oil industry weakens, dropping average gross national product growth to 0.2%/year during 1985-2000 from 8%/year during 1980-85 and forcing early, rapid export rise to cover international debt. ***Gross national product increases at about 8%/year long term. This is the basis of the government's program to encourage nonoil economic growth.

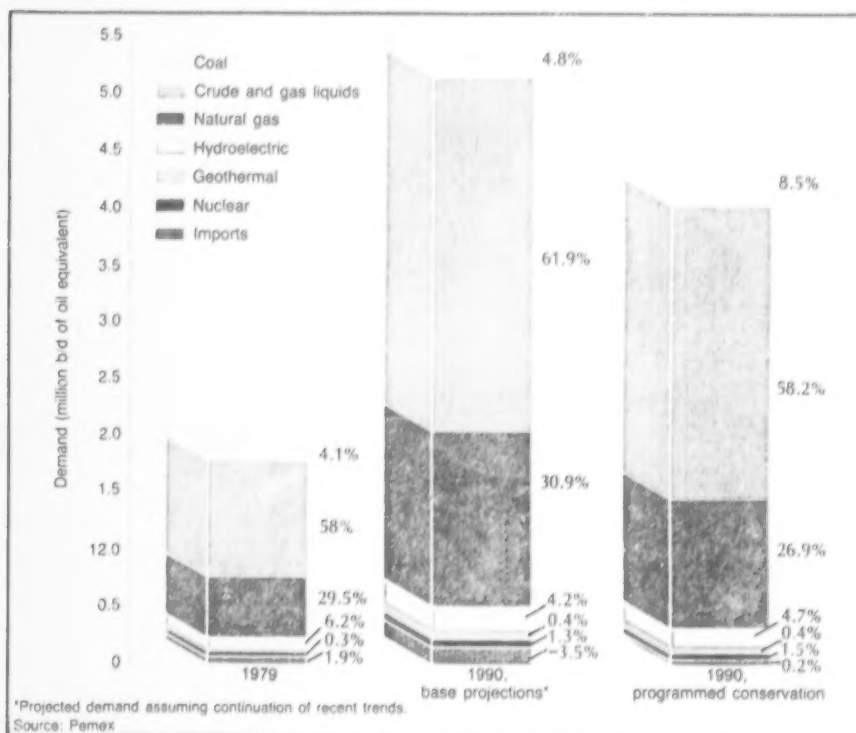
Source: Pemex

304

Pemex has big petrochem program underway

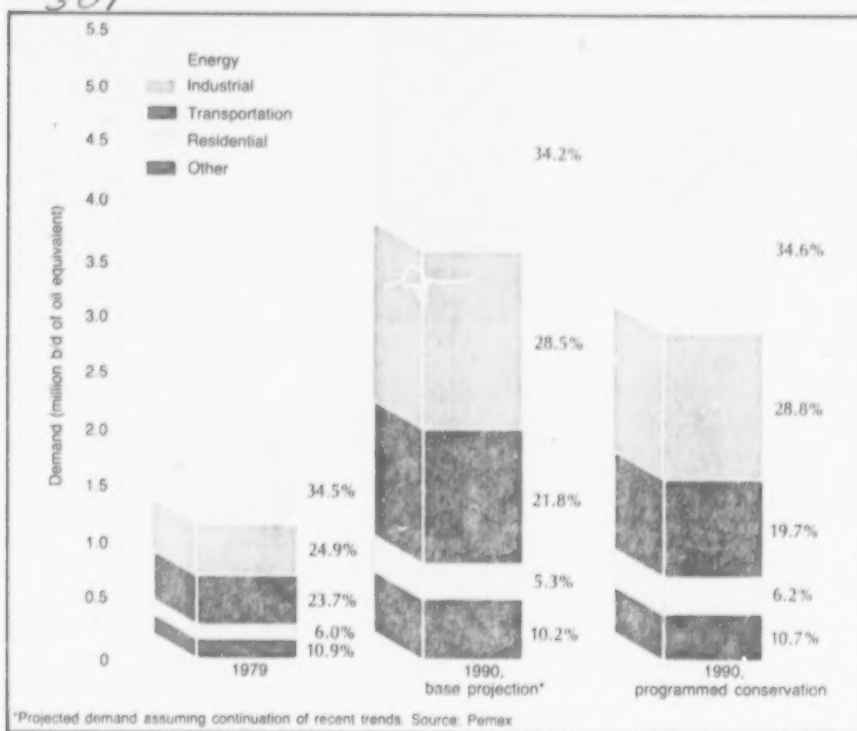
Location	Product	Nominal capacity, metric ton year	Comments
Morelos, Vera Cruz.....	Acetaldehyde	150,000	In engineering
	Butadiene	100,000	In engineering
	Ethylene	500,000	In engineering
	Propylene	26,900	In engineering
	Ethylene oxide	200,000	In engineering
	Polyethylene (high density)	100,000	In engineering
	Propylene	350,000	In engineering
	Polypropylene	100,000	In engineering
	Acrylonitrile	50,000	In engineering
	Isopropyl alcohol	75,000	In engineering
Salina Cruz, Oaxaca	Ammonia	445,000	In engineering
San Martin			
Texmelucan, Puebla	Propylene tetramer	80,000	In construction
	Dodecylbenzene	70,000	In construction
	Acrylonitrile	50,000	In engineering
Cosoleacaque,			
Vera Cruz.....	Ammonia	445,000	In construction
	Ammonia	445,000	In construction
	Acrylonitrile	50,000	In engineering
Camargo, Chihuahua	Ammonia	445,000	In engineering
Laguna del Ostrion,			
Vera Cruz.....	Methanol	825,000	In engineering

A look at Mexican energy demand



Where Pemex hopes to slow energy use

309



Worldwide oil and gas at a glance

COUNTRY	ESTIMATED PROVED RESERVES 1-1-1981		OIL PRODUCTION			No. of ref.	REFINING Capacity (b/cd) January 1, 1981			
	Oil (1,000 bbl)	Gas (10 ⁹ cu ft)	Producing wells July 1, 80	Estimated 1980 ^a (1,000 b/d)	% change from 1979		Crude	Catalytic Cracking	Thermal Cracking	Catalytic Reforming
ASIA-PACIFIC										
Australia	2,360,000	30,000	403	380.0	-13.8	12	743,100	160,900	...	160,580
Bangladesh	...	8,000	...	...	...	1	31,200	...	...	1,720
Brunei	1,710,000	7,300	578	230.0	-12.0	...	...	...	...	...
Burma	30,000	180	445	30.0	...	2	26,300	...	1,700	...
Rep. of China (Taiwan)	(c)9,000	600	82	(c)4.0	-20.0	2	515,410	9,040	...	49,760
Guam	...	...	...	...	...	1	43,900	...	...	...
India	2,580,000	12,000	1,600	185.0	-26.5	9	556,750	55,000	55,430	15,060
Indonesia	9,500,000	23,500	3,700	1,570.0	-1.6	9	445,200	12,500	32,600	27,400
Japan	52,000	500	388	10.0	...	45	5,454,000	341,870	40,000	541,780
Korea, South	...	...	...	...	...	6	606,745	...	...	25,640
Malaysia	3,000,000	15,000	230	280.0	-3.5	3	177,000	...	...	9,400
New Zealand	(c)173,000	6,100	16	(c)6.0	-25.0	1	74,000	...	...	24,000
Okinawa	...	...	...	...	...	3	208,000	...	...	12,500
Pakistan	196,500	15,100	19	10.0	...	3	122,036	...	...	4,848
Philippines	20,000	10	4	14.0	-46.2	3	246,300	24,900	...	38,300
Singapore	...	...	...	...	...	5	1,068,750	...	48,000	39,000
Sri Lanka	...	...	...	...	...	1	50,000	...	12,500	3,750
Thailand	...	8,000	...	...	...	3	186,000	7,000	17,000	25,500
Total Asia-Pacific	19,630,500	126,290	7,465	2,719.0	-4.9	109	10,554,691	611,210	207,230	979,238
WESTERN EUROPE										
Austria	130,000	365	1,120	29.0	-17.4	1	280,000	18,900	...	22,600
Belgium	...	...	...	...	...	8	1,055,900	85,000	...	132,200
Cyprus	...	...	...	...	...	1	16,000	...	...	2,800
Denmark	475,000	4,000	11	6.0	-50.0	3	215,000	...	72,150	37,900
Finland	...	...	...	...	...	2	336,000	9,500	12,000	54,800
France	40,000	6,000	296	25.0	-3.9	22	3,341,525	203,600	66,600	432,650
Germany, West	450,000	6,000	2,957	90.0	-4.3	31	3,021,247	182,400	382,454	399,718
Greece	150,000	4,000	...	...	...	4	428,000	17,500	11,400	29,850
Ireland	...	950	...	...	...	1	56,000	...	...	14,500
Italy-Sicily	640,000	3,500	116	38.0	+26.7	32	4,091,940	284,700	110,230	409,300
Netherlands	285,000	62,000	480	24.0	-4.0	8	1,827,000	75,000	113,350	212,100
Norway	5,500,000	42,700	100	530.0	+31.5	4	252,700	...	69,000	29,800
Portugal	...	...	...	...	...	2	341,000	...	11,000	51,500
Spain	350,000	3,500	31	25.0	+66.7	10	1,463,800	...	13,000	191,600
Sweden	...	...	...	...	...	6	450,900	...	33,000	58,000
Switzerland	...	...	...	...	...	2	102,300	...	24,000	22,200
United Kingdom	14,800,000	24,800	290	1,600.0	+2.0	19	2,629,480	194,300	125,000	433,660
Yugoslavia	265,000	1,500	NA	80.0	+14.3	7	297,007	1,960	6,100	45,156
Total Western Europe	23,085,000	159,315	5,401	2,447.0	+7.7	163	20,205,799	1,072,850	1,049,284	2,580,334
MIDDLE EAST										
Abu Dhabi	29,000,000	20,000	341	1,380.0	-5.7	1	12,500	...	...	2,520
Bahrain	225,000	9,000	242	49.0	-2.0	1	250,000	34,200	19,000	17,100
Divided (Neutral) Zone	6,060,000	4,800	412	550.0	-3.0	...	...	...	...	...
Dubai	1,400,000	775	79	350.0	-1.1	...	...	...	...	...
Iran	57,500,000	485,000	547	1,280.0	-58.8	6	1,120,500	36,000	80,800	90,445
Iraq	30,000,000	27,450	250	2,600.0	-24.3	7	168,500	...	...	5,000
Israel	1,000	100	9	0.7	-98.0	2	190,000	15,000	44,000	24,300
Jordan	...	...	...	...	...	1	36,236	4,410	...	870
Kuwait	64,900,000	30,800	590	1,400.0	-36.6	5	645,000	...	...	21,600
Lebanon	...	...	...	...	...	2	52,000	7,250	...	7,292
Oman	2,340,000	2,500	269	280.0	-5.1	...	...	...	...	...
Oatoot	3,585,000	60,000	124	470.0	-5.8	1	12,838	...	...	2,000
Saudi Arabia	165,000,000	110,000	733	9,620.0	+4.0	3	487,332	...	2,530	45,386
Sharjah	10,000	...	4	10.0	-23.1	...	...	...	...	...
South Yemen (Aden)	...	...	...	...	...	1	175,000	...	...	14,000
Syria	1,940,000	1,500	179	165.0	+1.2	2	223,040	...	37,779	16,975
Turkey	110,000	490	414	42.0	-25.0	4	355,700	41,260	...	29,875
Total Middle East	362,071,000	752,415	4,193	18,196.7	-15.4	36	3,729,646	138,120	184,109	277,363

EDITOR'S NOTE: All reserves figures except those for the U.S.S.R. (and gas for Canada) are proved reserves recoverable with present technology and prices. U.S.S.R. figures are "export reserves," which include proved, probable, and some possible. Canadian gas figure, under new criteria adopted by Canadian Petroleum Association, includes proved and some probable. *Condensate. *Includes Gulf of Suez fields returned by Israel in late 1979. †Estimates based on capacity as of Jan. 1, 1980, plus known 1980 expansions. ‡Includes Albania, Bulgaria, Cuba, Czechoslovakia, East Germany, Hungary, Mongolia, N. Korea, Poland, Rumania, and Viet Nam.

BEST AVAILABLE COPY

COUNTRY	ESTIMATED PROVED RESERVES 1-1-1981		OIL PRODUCTION			No. of ref.	REFINING Capacity (b/cd) January 1, 1981			
	Oil (1,000 bbl)	Gas (10 ⁹ cu ft)	Producing wells July 1, 80	Estimated 1980 (1,000 b/d)	% change from 1979		Crude	Catalytic Cracking	Thermal Cracking	Catalytic Reforming
AFRICA										
Algeria	8,200,000	131,500	1,000	1,000.0	-10.1	3	122,400	...	...	23,600
Angola-Cabinda	1,200,000	1,050	189	150.0	+2.0	1	31,100	...	...	1,900
Cameroon	200,000	...	49	57.0	+68.7	...	...	...	...	...
Congo Republic	660,000	2,000	119	56.0	...	...	...	...	...	...
Egypt	*2,900,000	*2,970	*484	*585.0	+15.6	6	292,000	...	...	7,000
Ethiopia	...	...	...	...	...	1	14,430	...	...	1,890
Gabon	450,000	500	242	145.0	-27.0	1	20,000	...	7,200	1,400
Ghana	6,300	...	3	2.0	...	1	25,550	...	...	4,750
Ivory Coast	50,000	...	(On stream late 1980 3,000 b/d.)			2	50,400	...	...	4,500
Kenya	...	...	...	...	...	1	95,000	...	...	9,000
Liberia	...	...	...	...	...	1	15,000	...	...	2,400
Libya	23,000,000	23,800	886	1,780.0	-13.4	6	142,000	...	...	15,500
Madagascar	...	...	...	...	...	1	11,440	...	...	1,610
Morocco	75	...	NA	0.2	...	2	72,000	5,600	...	9,200
Mozambique	...	...	...	...	...	1	18,000	...	...	...
Nigeria	16,700,000	41,000	1,451	2,100.0	-9.2	2	160,000	26,000	...	22,000
Senegal	...	...	...	...	...	1	20,138	...	...	2,114
Sierra Leone	...	...	...	...	...	1	10,000	...	...	...
South Africa	...	...	...	...	...	4	468,500	85,000	63,500	67,500
Sudan	...	...	...	...	...	1	24,000	...	...	2,100
Tanzania	...	...	...	...	...	1	12,200	...	...	3,500
Togo	...	...	...	...	...	1	20,000	...	...	3,030
Tunisia	1,652,000	5,600	87	100.0	...	1	34,000	...	...	3,300
Zaire	130,000	50	13	22.0	+10.1	1	17,000	...	...	3,000
Zambia	...	...	...	...	...	1	24,500	...	...	5,600
Total Africa	55,148,375	208,470	4,522	5,997.2	-9.2	41	1,697,658	116,600	70,700	194,994
WESTERN HEMISPHERE										
Argentina	2,457,000	22,000	6,822	490.0	+4.9	12	678,550	95,900	53,230	36,900
Bahamas	...	...	...	...	...	1	500,000	...	...	...
Barbados	837	1	34	1.0	...	1	3,000	...	...	...
Bolivia	112,000	4,200	292	30.0	-9.1	4	74,000	...	...	13,800
Brazil	1,300,000	1,500	1,615	190.0	+18.0	13	1,401,600	216,400	1,765	21,600
Chile	400,000	2,500	380	30.0	+30.4	2	139,230	34,650	8,820	9,954
Colombia	800,300	6,000	2,123	125.0	+0.8	6	198,500	77,000	41,000	6,000
Costa Rica	...	...	...	...	...	1	15,000	...	...	...
Dominican Republic	...	...	...	...	...	2	48,461	...	...	9,500
Ecuador	1,100,000	4,000	477	230.0	+2.2	2	87,100	11,400	13,800	...
El Salvador	...	...	...	...	...	1	16,300	...	...	2,800
Guatemala	20,000	10	3	3.0	+87.5	1	16,000	...	...	3,000
Honduras	...	...	...	...	...	1	14,000	...	...	1,800
Jamaica	...	...	...	...	...	1	22,000	...	...	3,500
Martinique	...	...	...	...	...	1	14,000	...	...	3,380
Mexico	44,000,000	64,500	3,384	1,960.0	+34.2	9	1,393,500	297,000	78,000	81,800
Netherlands Antilles	...	...	...	...	...	2	782,000	42,000	283,000	15,000
Nicaragua	...	...	...	...	...	1	14,400	...	...	2,850
Panama	...	...	...	...	...	1	100,000	...	...	7,500
Paraguay	...	...	...	...	...	1	7,500	...	...	...
Peru	650,000	1,100	2,782	190.0	-2.6	4	168,900	23,390	...	1,760
Puerto Rico	...	...	...	...	...	3	284,000	52,000	20,000	76,000
Trinidad & Tobago	700,000	12,000	3,349	215.0	...	2	456,000	25,000	...	27,000
Uruguay	...	...	...	...	...	1	40,000	4,000	5,000	2,500
Venezuela	17,950,000	42,000	5,042	2,150.0	-8.7	9	1,348,840	72,200	74,520	19,100
Virgin Islands	...	...	...	...	...	1	728,000	...	...	70,000
United States	26,400,000	191,000	526,855	8,650.0	+1.4	297	118,400,000	14,775,000	1,338,000	13,690,000
Canada	6,400,000	87,300	20,721	1,470.0	-1.7	33	12,166,000	1,457,580	131,140	138,780
Western Hemisphere	102,289,837	438,111	573,879	15,734.0	+2.9	415	29,116,881	6,183,520	948,275	4,492,444
Total Non-Communist ...	562,224,712	1,684,601	595,460	45,093.9	-7.0	761	65,304,675	8,122,310	2,459,598	8,524,373
COMMUNIST AREAS										
Cuba	20,500,000	24,500	NA	2,170.0	+1.2	20	1,810,000	NA	NA	NA
S.S.R.	63,000,000	920,000	NA	12,050.0	+2.9	32	11,400,000	NA	NA	NA
North Vietnam	2,800,000	9,400	NA	360.0	-5.3	38	2,826,500	NA	NA	NA
Communist	86,300,000	953,900	NA	14,580.0	+2.5	90	16,036,500	NA	NA	NA
THE WORLD										
Total	648,524,712	2,638,501	595,460	59,673.9	-4.8	851	81,340,850			

Worldwide Production

• Offshore

(e) Estimated

(c) Condensate

(NA) Not available

WORLDWIDE PRODUCTION	Name of field, discovery date	Depth, feet	Flow	No. of wells Artificial lift	Shut-in	B'd average, first 6 mo. 1981	Cumulative, bbl, to July 1, 1981	*API gravity
ABU DHABI	AMERADA GROUP							
	• Arzanah, 1973	10,750	5	...	3	13,527	1,356,826	41.0-44.0
	CFP GROUP							
	• Abu Al Bukhoosh, 1969	5,600-7,200	8	4	3	58,518	174,111,176	32.0
	• Mubarras, 1969	8,950-10,700	8	11	2	19,885	58,172,775	36.0
	• El Bunduq, 1965	8,300	...	...	13	...	18,243,841	40.0
	ADNOC							
	Asab, 1965	7,500-7,900	43	...	40	272,318	936,543,708	41.0
	Bab, 1953	7,900-9,900	26	...	46	61,611	672,910,200	44.0
	Bu-Hasa, 1962	7,500-8,000	43	...	24	253,607	2,188,349,626	40.0
	Sahil, 1967	8,560-9,000	14	...	4	15,572	46,843,419	41.0
	• Umm Shaif, 1958	8,500	56	...	17	255,851	1,048,647,650	37.0
	• Upper Zakum, 1964	9,150	13	...	12	28,383	149,070,692	39.0
	• Lower Zakum, 1964	9,100	46	...	23	207,076	1,006,414,215	39.0
Total Abu Dhabi			262	15	187	1,186,348	6,300,664,128	
ALGERIA	SONATRACH							
	Zarzaitine, 1957	4,700	...	...	...	40,029	7,245,326	42.2
	Edjeleh, 1956	1,500-2,800	...	...	...	7,716	1,396,594	37.2
	Tiguentourine, 1966	2,160-4,265	...	...	...	2,572	465,506	44.4
	El Adeb Lareche, 1958	4,100	...	...	...	3,108	562,588	43.3
	Assakarfaf N. & S., 1958	2,800	...	...	...	291	52,701	42.7
	Tan Emellel N. & S., 1960	2,800-4,500	...	...	...	113	20,412	42.5
	Edeyen, 1964	5,580	...	...	...	488	68,273	41.5
	Hassi Mazoula S., 1963	4,430	...	...	...	2,361	427,329	40.2
	Hassi Mazoula B., 1965	4,920	...	...	...	356	32,409	42.0
	Acheb W. & Kreb, 1963 & 1960	7,360	...	...	...	3,826	692,438	45.6
	Tin Fouye N. + F6, 1962	4,265	...	...	...	18,465	3,342,217	39.6
	El Borma, 1967	8,200	...	...	...	11,967	2,166,061	42.9
	Keskassa, 1968	8,860	...	...	...	625	113,176	42.9
	Mereksen, 1974	9,420	...	...	...	21,932	3,969,679	45.8
	Gara, 1962	9,420	...	...	...	791	143,145	42.9
	Hassi Messaoud N., 1956	10,500	...	...	...	199,361	36,084,379	45.9
	Hassi Messaoud S., 1956	10,500	...	...	...	269,559	48,790,110	46.1
	Gassi-Touil & Gassi-Touil E., 1961	6,890	...	...	...	23,325	4,221,751	50.6-50.8
	Hassi Chergui	8,200	...	...	...	1,269	229,711	50.6
	Nezla N., 1965	8,530	...	...	...	470	84,984	51.5
	Rhourde El Baguel, 1962	9,850	...	...	...	22,953	4,154,494	40.2
	Mesdar E. & W., 1972	11,155	...	...	...	11,207	2,028,526	40.3
	El Gassi-El Agreb, 1959	10,170	...	...	...	28,357	5,132,534	47.9
	Rhourde Nouss & E., 1972	8,530	...	...	...	2,745	496,932	39.7
	Tin Foye Tabankort, 1966	4,600-6,560	...	...	...	40,451	7,321,699	41.1-41.3
	Djoua W., 1967	5,580-6,240	...	...	...	1,222	221,207	41.1
	Amassak, 1970	6,565	...	...	...	4,435	802,701	41.1
	Tamendjelt, 1970	5,585-6,890	...	...	...	3,657	661,851	41.1
	Timedratine, 1964	8,155	...	...	...	14,454	2,616,160	42.7
	Ohaneb N. & S., 1960	7,878	...	...	...	8,873	1,606,070	43.8
	Askarene, 1962	8,200	...	...	...	1,456	263,583	41.7
	Guelta, 1962	8,960	...	...	...	783	141,689	41.7
	Stah, 1971	9,515	...	...	...	30,013	5,432,321	45.8
	Ras Toub, 1976	9,190	...	...	...	418	75,585	35.7
	Haoud Berkouli-Ben Kahla, 1965	11,000	...	...	...	20,932	3,788,635	43.6
	Guelhala-Guelhala N.E., 1969	11,320	...	...	...	23,588	4,269,339	42.2-42.3
	N'Goussa, 1974	11,715	...	...	...	1,870	338,518	42.2
	Kef El Argoub, 1973	12,570	...	...	...	1,067	193,173	42.2
	Oued Noumer, 1969	8,860	...	...	...	10,155	1,837,975	48.3
	Djorf, 1974	9,025	...	...	...	128	23,092	48.3
	Djebel Onk, 1960	3,940	...	...	...	637	115,325	37.0
	Alrar FJT	...	...	...	...	3,439	622,451	...
	Hassi R'Mel ^(c)	...	...	...	...	167,856	30,381,989	...
	Gassi Touil ^(c)	...	...	...	...	5,017	908,072	...
	Other Crude	...	...	...	...	23,499	4,253,378	...
	Condensate	...	...	...	...	11,394	2,062,274	...
Total Algeria			770	220	280	1,049,230	6,001,968,950	
ANGOLA	PETROBRAS S.A.R.L.							
	Bento, 1972	7,500	1	...	2	556	4,056,500	26.0
	Ganda, 1975	5,010	1	...	...	904	1,722,237	36.1
	N'Z Kitona S. & D., 1973	5,200-5,670	4	...	2	5,726	5,869,354	30.4
	N'Z Pangala, 1973	4,997-5,095	6	...	2	10,822	29,272,891	36.1
	N'Zombo, SW I, SW S. & SE S, 1973	5,245-6,270	4	...	2	4,894	18,504,215	30.2-31.0
	Quenguela, N., A+B, C, S, MN, 1968	4,900-6,200	2	15	60	1,899	30,032,990	31.1
	Quiniquena I & S, 1975	6,800-7,050	6	...	1	6,891	12,434,881	31.4-32.0
	Quingula, 1972	4,100	1	9	5	8,831	15,669,019	36.2
	Other	...	17	9	32	2,486	41,233,607	...

WORLDWIDE PRODUCTION	Name of field, discovery date	Depth, feet	Flow	No. of wells Artificial lift	Shut-in	B'd average, first 6 mo. 1981	Cumulative, bbl. to July 1, 1981	*API gravity
GULF CABINDA	• Erva, 1969	10,650	...	...	1	21	2,929,821	30.2
	• Kambala, 1971	11,100	2	...	...	3,848	2,840,226	32.8
	• Kungulo, 1976	3,900	6	...	2	5,693	8,581,726	32.2
	• Limba, 1969	2,900- 8,750	5	3	2	18,134	50,623,611	31.6
	• Livuile, 1979	8,200	1	0	0	163	174,812	31.7
	• Malongo, N., 1966	1,500- 8,500	8	42	7	23,430	171,911,459	29.6
	• Malongo, S., 1966	1,300- 1,600	3	22	5	9,096	51,754,795	25.1
	• Malongo, W., 1969	1,800- 6,900	11	9	22	26,025	186,404,657	22.5
	• Cuntala, 1978	7,000- 7,500	1	...	...	1,877	908,275	34.0
	• Essungo*	6,500-6,750	2	...	...	412	92,178	34.0
Total Angola			81	109	145	131,708	635,017,364	
*First production in June 1981.								

ARGENTINA*

Chubut, 1907	1,968- 9,186	6	1,557	180	97,516	784,989,506	21.1-26.8
Jujuy, 1969	2,461-16,732	7	...	...	1,702	57,577,433	46.5-47.2
La Pampa, 1968	3,609- 4,921	...	171	6	11,740	54,094,704	31.1-31.3
Mendoza, 1932	2,178-16,778	14	842	74	112,044	821,704,718	23.7-32.1
Neuquen, 1918	1,312-12,498	161	494	127	68,186	324,273,551	24.0-41.1
Rio Negro, 1960	2,953- 7,546	43	949	61	54,787	331,658,391	22.5-41.1
Salta, 1928	6,551-15,092	39	3	11	8,075	93,677,602	39.0-59.7
Santa Cruz, 1946	1,468-17,060	157	2,220	207	107,660	739,941,538	21.1-30.4
Tierra del Fuego, 1959	5,249- 7,824	70	89	45	25,926	100,959,033	43.4-46.0
Other	...	...	...	...	2,003	258,180,715	...
Total Argentina		497	6,325	711	489,639	3,567,057,191	

*Total output by YPF and all contract producers by provinces

AUSTRALIA

ESSO-BHP	● Barracouta, 1968	4,550	2	...	1,893	17,968,224	62.8	
	● Cobia, 1972	7,700	1	...	1,443	989,515	44.6	
	● Halibut, 1967	7,700	17	...	2	94,671	496,825,127	43.3
	● Kingfish, 1967	7,500	21	6	15	136,407	761,460,055	46.9
	● Mackerel, 1969	7,700	17	...	1	104,284	100,219,593	45.6
	● Tuna, 1968	6,500	9	...	...	11,168	6,107,485	40.5
INTERNATIONAL OIL	Alton, 1964	6,000	...	4	1	57	1,791,498	50.5
	Cabawin, 1961	5,800	1	...	...	20	28,864	51.5
	Moonie, 1961	5,800	...	21	1	839	20,067,033	44.5
	Bennett, 1965	5,330	...	1	...	6	87,529	45.0
PET GROUP	Barrow Island, 1964	2,200- 6,700	5	294	74	25,033	176,500,000	36.0
Total Australia			73	326	94	375,821	1,582,044,923	

AUSTRIA

OEMV	Hochleiten, 1974	3,100- 5,000	5	14	20	793	454,770	21.3
	Matzen, 1949	4,200- 7,200	20	707	186	14,497	351,335,003	25.7
	Muehlberg, 1942	3,900- 5,500	...	48	8	539	37,225,660	35.0
	Piperbach, 1968	3,500	2	7	...	230	3,149,878	39.0
	Pirawarth, 1957	1,600- 6,500	1	3	66	878	9,654,373	28.4
	St. Ulrich, 1938	1,600- 4,300	1	127	66	1,034	39,572,616	33.0
	Schoenkirchen-Prottes Tief, 1962	7,800-10,100	1	3	19	241	54,618,061	31.1
	Other	...	6	93	24	1,123	34,401,437	...
	Voitsdorf, 1963	7,000	3	22	7	834	19,900,400	36.0
	Sattledt, 1971	5,700	...	11	3	834	3,626,300	37.0
MOBIL	Kemating, 1979	6,100	...	4	2	1,486	852,400	36.0
	Gaiselberg, 1938	5,200	1	26	31	809	30,200,600	24.0
	Other	...	1	58	26	2,006	21,479,800	...
	Total Austria		41	1,123	458	25,304	606,471,298	

BAHRAIN

BANDCO	Awali, 1932	1,850- 4,600	158	85	34	45,314	692,300,000	33.0
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BARBADOS

MOBIL	Woodbourne, 1966	6,500	...	30	6	700	1,465,431	32.0
	Other	...	...	...	2	...	42,439	...
Total Barbados			...	30	8	700	1,507,870	

BOLIVIA

YPFB	Caigua, 1973	3,280	6	...	...	109	6,093,356	45.0
	Camiri, 1927	3,936	10	46	...	881	46,862,824	55.0
	Cambeiti, 1976	5,400	3	3	...	218	685,400	48.0
	Carand, 1960	3,940	10	17	...	953	52,182,214	60.0
	Colpa, 1961	9,184	24	...	...	1,028	16,992,719	65.0
	Monteagudo, 1966	4,592	12	17	...	2,640	26,875,503	41.0
	La Pena, 1965	8,856	20	1	...	1,272	18,236,706	43.0
	Palmar, 1964	10,758	6	...	...	834	846,680	65.0
	Rio Grande, 1961	9,512	35	...	...	9,298	48,871,212	62.0
	Tatarenda, 1962	2,296	2	9	...	219	6,864,328	51.0
	Espino, 1979	14,655	1	...	...	591	220,089	56.2
	Other	...	23	36	...	3,313	16,740,039	...
OCCIDENTAL ^(c)	Tita, 1976	6,450	13	1	0	1,477	2,988,067	70.5
	Porvenir, 1978	9,600	...	...	8	...	...	69.5
TESORO ^(e)	La Vertiente, 1977	10,827	1	...	...	810	566,600	...
	Total Bolivia		166	130	8	23,643	245,025,737	

BRAZIL

PETROBRAS	Agua Grande, 1951	820- 4,265	27	78	56	9,588	257,132,345	42.0
	Aracas, 1965	3,280- 8,856	6	81	15	9,946	87,557,469	41.0

WORLDWIDE PRODUCTION	Name of field, discovery date	Depth, feet	Flow	No. of wells Artificial lift	Shut-in	B'd average, first 6 mo. 1981	Cumulative, bbl. to July 1, 1981	*API gravity
	Buracica, 1959	1,476-1,840	...	138	8	10,196	116,328,637	35.0
	Candeias, 1941	3,280-7,415	1	41	80	3,685	70,728,065	31.0
	• Caioba, 1969	6,232-6,890	9	1	3	6,390	21,087,001	36.0
	Carmopolis, 1963	2,460	1	391	76	20,486	106,170,459	24.0
	Cassaronongo, 1959	1,475-4,755	...	15	11	1,015	11,997,554	32.0
	• D. João Mar, 1947	920	3	262	142	7,184	67,343,989	38.0
	• Dourado, 1970	3,620-3,635	4	...	...	1,453	2,316,395	36.0
	Faz. Boa Esperanca, 1966	7,215-8,036	...	6	4	1,843	12,367,760	40.0
	Fazenda Ikbe, 1964	2,130-5,575	2	15	6	1,222	11,123,744	42.0
	Furado, 1969	4,440-5,500	6	29	13	2,189	8,061,247	35.0
	• Guaricema, 1968	3,335-4,430	11	5	4	4,654	23,856,205	41.0
	Malombe, 1966	3,280	...	15	3	1,200	5,314,271	31.0
	Miranga, 1965	3,280-3,936	9	139	46	14,244	151,686,647	41.0
	Remanso, 1971	4,445-4,560	12	41	24	2,440	13,588,861	35.0
	Riachuelo, 1961	1,475	...	124	42	3,485	10,314,203	28.0
	Sirinzinho, 1967	1,640	...	81	25	4,063	22,325,035	30.0
	Taguipé, 1959	3,115-3,935	1	49	15	5,236	73,496,193	40.0
	• Ubarana, 1973	7,216-8,365	26	...	6	8,416	10,656,047	40.0
	• Agulha, 1975	5,412	6	...	2	3,994	3,450,081	31.0
	• Enchova, 1976	6,973-7,885	4	...	...	12,290	14,979,115	27.0
	• Cacao, 1978	9,184	3	...	...	2,019	3,571,374	37.0
	• Garoupa, 1974	11,382	3	...	2	8,221	3,956,473	30.0
	• Namorado, 1975	10,083	4	...	...	15,215	7,600,601	28.0
	• Camurim, 1971	6,232	21	3	1	2,723	6,012,546	28.0
	• Curima, 1978	6,888	3	...	...	4,554	1,898,954	32.0
	Faz. Cedro, 1972	5,248	...	9	7	1,044	7,404,611	29.0
	• Bas-37	5,261-5,572	2	...	...	1,003	456,520	41.0
	• Xareu	5,717-5,766	6	...	...	2,032	367,230	39.0
	• Pampo	6,215	1	...	...	7,856	1,443,635	21.0
	Lagoa Parda	5,576	14	...	...	10,598	2,886,729	34.0
	• Norte Garoupa	12,693	1	...	...	6,302	1,478,927	29.0
	Other	...	28	215	136	11,511	58,491,374	...
	Total Brazil	...	214	1,738	727	208,297	1,197,540,297	...
BRUNEI	BRUNEI SHELL	• Ampa SW, 1963	7,068-8,155	114	83	48,236	451,176,015	41.0
		• Champion, 1970	4,300	88	66	44,589	175,790,606	23.0
		• Fairley, 1969	10,740	36	8	17,254	77,821,477	40.0
		• Fairley-Baram, 1963	9,500	4	1	2,618	10,897,332	40.0
		• Magpie, 1975	...	14	1	18,632	20,715,654	31.0
		Seria, 1928	...	315	79	34,488	907,762,780	34.0
		Other	...	...	4	...	638,066	...
	Total Brunei	...	571	242	165,817	1,644,801,930	...	...
BURMA ^(e)	MYANMA	Chauk-Lanywa, 1902	1,500-4,000	...	...	...	...	36.0
		Mann, 1970	1,600-7,000	...	...	...	...	37.5
		Myanaung, 1964	2,000-4,000	170	275	30,000	422,480,000	40.5
		Prome, 1965	850-5,000	...	...	...	...	36.0
		Yenangyaung, 1902	100-6,700	...	...	...	...	36.0
	Total Burma	...	170	275	30,000	422,480,000	...	...
CAMEROON	ELF	• Betika, 1972	5,300	12	3	9,271	6,692,433	42.3
		• Ekoundou North Center, 1972	7,200	23	21	16,146	3,597,138	34.7
		• Ekoundou South, 1975	6,200	12	3	9,340	8,954,827	28.6
		• Kole, 1974	5,500	12	3	12,171	15,151,091	31.3
		• Kombo North, 1978	7,200	6	...	4,485	983,012	35.0
		• Kombo South Center, 1976	5,900	16	...	33,951	18,239,078	37.0
	Total Cameroon	...	81	30	85,364	53,617,579	...	...
CANADA	ALBERTA	Acheson, 1950	3,390	124	14,000	92,000,000	38.0	...
		Bantry, 1940	2,574-3,300	156	4,000	31,000,000	...	...
		Bellshill Lake, 1955	2,950	198	6,000	34,000,000	...	...
		Bonnie Glen, 1952	3,950-6,779	158	80,000	372,000,000	34.0-44.0	...
		Carson Creek, N., 1958	8,787-8,935	69	17,000	101,000,000	44.0	...
		Cessford, 1950	2,800-3,028	225	4,000	24,000,000	...	...
		Clive, 1951	6,074-6,208	132	8,000	40,000,000	...	...
		Countess, 1951	2,858-4,272	112	10,000	32,000,000	...	...
		Fenn-Big Valley, 1950	3,900-5,400	321	47,000	226,000,000	32.0	...
		Gilby, 1962	4,201-7,000	130	4,000	43,000,000	...	...
		Golden Spike, 1949	3,570-5,961	75	6,000	222,000,000	36.0	...
		Harmattan, E.	8,040-8,558	84	7,000	60,000,000	...	...
		Harmattan-Elkton, 1955	8,796-10,757	68	5,000	52,000,000	...	...
		Innisfail, 1956	6,730-8,440	77	8,000	65,000,000	...	...
		Joarcam, 1949	3,179	227	4,000	88,000,000	...	...
		Joffre, 1953	4,983-6,779	141	3,000	74,000,000	...	...
		Judy Creek, 1951	8,307-8,701	261	32,000	336,000,000	43.0	...
		Kaybob, 1957	4,870-9,577	85	9,000	82,000,000	...	...
		Kaybob, S., 1958	5,600-10,042	100	10,000	65,000,000	...	...
		Leduc-Woodbend, 1947	3,062-5,380	736	9,000	360,000,000	40.0	...

Name of field, discovery date		Depth, feet	No. of wells capable of prod.	B/d average, first 6 mo. 1981	Cumulative, bbl, to July 1, 1981	*API gravity
Lloydminster, 1933		1,690- 1,945	648	6,000	37,000,000	...
Medicine River, 1954		5,435- 7,600	235	9,000	51,000,000	...
Mitsue, 1964		5,908	251	38,000	203,000,000	43.0
Nipisi, 1965		5,648- 5,726	243	35,000	183,000,000	41.0
Pembina, 1953		3,000- 6,133	3,398	78,000	1,002,000,000	32.0-37.0
Provost, 1946		2,760- 2,898	727	8,000	46,000,000	...
Rainbow, 1965		4,994- 6,160	167	67,000	368,000,000	38.0-42.0
Rainbow, S., 1965		6,102- 6,400	37	7,000	56,000,000	...
Red Earth, 1956		4,184- 4,878	143	4,000	30,000,000	...
Redwater, 1948		2,012- 3,200	823	56,000	727,000,000	35.0
Simonette, 1958		10,500	18	6,000	35,000,000	...
Snipe Lake, 1962		8,500	94	4,000	47,000,000	...
Sturgeon Lake, S., 1953		4,912- 8,471	141	12,000	105,000,000	37.0
Sundre, 1954		8,700- 9,000	53	3,000	32,000,000	...
Swan Hills, 1957		8,100	723	62,000	555,000,000	40.0
Swan Hills, S., 1959		8,400	192	43,000	281,000,000	37.0
Turner Valley, 1913		3,100- 9,150	161	3,000	132,000,000	39.0
Utikuma Lake, 1963		5,624	90	8,000	32,000,000	...
Virginia Hills, 1957		9,210	153	10,000	111,000,000	34.0
Wainwright, 1925		1,903- 2,200	475	7,000	52,000,000	...
Westrose, 1952		6,818	17	18,000	87,000,000	...
Williston Green, 1956		5,157	627	12,000	89,000,000	...
Wizard Lake, 1951		4,044- 5,973	37	49,000	245,000,000	...
Zama		3,702	191	5,000	65,000,000	33.0-37.0
Other		...	6,303	288,030	1,013,601,801	...
BRITISH COLUMBIA						
Boundary Lake, 1957		3,418- 4,575	346	14,000	139,000,000	40.0
Other		...	2,441	20,000	191,000,000	...
MANITOBA						
All fields		...	830	9,000	129,000,000	...
SASKATCHEWAN						
Steelman, 1950		4,600	634	12,000	230,000,000	27.0
Weyburn, 1955		4,600	576	17,000	250,000,000	28.0
Other		...	9,098	131,000	1,283,716,780	...
ONTARIO						
All fields		...	...	2,000	57,000,000	...
NEW BRUNSWICK						
All fields		...	...	...	797,000	...
NORTHWEST TERRITORIES						
All fields		...	53	3,000	24,000,000	...
Total Canada			33,404	1,333,030	10,288,115,581	

Name of field, discovery date		Depth, feet	Flow	No. of wells Artificial lift	Shut-in	B/d average, first 6 mo. 1981	Cumulative, bbl, to July 1, 1981	*API gravity
CHILE								
ENAP-MAINLAND								
Canadon, 1962		6,090	...	...	...	...	...	38.4
Daniel, 1960		5,806	...	...	...	...	...	25.4
Daniel Este, 1961		5,523	111	30	...	7,036	112,157,484	25.0
Dungenes, 1962		5,251	...	...	...	...	...	28.6
Posesion, 1960		6,622	...	...	...	...	...	63.6
TIERRA DEL FUEGO								
Calafate, 1955		6,045	...	...	...	...	...	49.3
Catalina Sur, 1961		5,779	71	30	...	4,082	138,345,260	14.0
Cullen, 1954		5,730	...	...	...	...	...	41.8
Tres Lagos, 1957		5,724	...	...	...	...	...	40.1
STRAIT OF MAGELLAN								
● Ostion		7,156	...	...	...	...	...	33.0
● Spiteful		6,298	...	...	...	...	...	34.5
● Spiteful Norte		7,150	39	24	...	28,657	18,452,417	...
● Posesion PO-2, 1977		6,727	...	...	...	...	...	...
Total Chile			221	84	...	39,775	268,955,161	
CHINA								
CHINESE PETROLEUM								
Tiechengshan, (c) 1959			28	...	6	2,302	11,736,851	51
Chingtsou, (c) 1967			7	...	6	244	...	50
Yunghoshan, (c) 1971			4	...	1	444	4,583,701	45
Other			38	...	12	357	...	50
Total Republic of China			77		25	3,347	16,320,552	

COLOMBIA								
ECOPETROL (®)								
Bonanza, 1964		4,000	...	...	...	...	...	30.0
Boquete, 1961		8,000	...	...	...	...	...	43.0
Burdine, 1974		11,000	...	...	...	...	...	26.3
Cantagallo, 1941		6,800	...	...	...	...	...	19.7
Casabe, 1941		3,800	...	...	...	...	...	20.7
Castilla, 1976		7,400	...	...	...	...	...	13.2
Cocorna, 1963		2,000	...	...	...	...	...	12.6
Dina, 1962		2,900	...	...	...	...	...	22.5
Galan, 1945		3,200	...	...	...	...	...	19.0
Infantas, 1918		3,200	...	...	...	...	...	25.8
La Cira, 1925		3,250	123	2,000	100	125,000	2,188,356,500	24.0
Lisama, 1957		9,500	...	...	...	...	...	31.0
Llanito, 1960		7,300	...	...	...	...	...	21.0
Loro, 1964		9,600	...	...	...	...	...	30.5
Orto, 1963		6,600	...	...	...	...	...	39.7
Ortega, 1953		4,300	...	...	...	...	...	27.0
Palagua, 1954		4,500	...	...	...	...	...	15.2
Payoa, 1962		8,000	...	...	...	...	...	36.7
Provincia, 1962		8,000	...	...	...	...	...	33.0
Pto. Colon, 1965		9,600	...	...	...	...	...	30.5

WORLDWIDE PRODUCTION	Name of field, discovery date	Depth, feet	Flow	No. of wells Artificial lift	Shut-in	B/d average, first 6 mo. 1981	Cumulative, bbl, to July 1, 1981	*API gravity
	Rio Zulia, 1961	6,500	...	...	...	...	...	41.4
	Salina, 1971	2,500	...	...	...	...	...	24.0
	Tello, 1972	4,200	...	...	...	...	...	20.2
	Tribu, 1940	4,200	...	...	...	...	...	37.2
	Velasquez, 1945	5,300	...	...	...	...	...	22.4
	Yarigui, 1954	6,800	...	...	...	...	...	19.5
	Other	...	...	...	...	...	...	...
	Total Colombia		123	2,000	100	125,000	2,188,356,500	
CONGO	AGIP Loango, 1972	3,000	3	31	2	24,200	34,164,000	27.0
	ELF CONGO • Emeraude, 1969	1,000	...	87	7	30,330	105,580,000	23.3
	• Pointe Indienne, 1957	5,000	2	...	1	210	6,580,200	36.9
	• Likouala, 1972	4,000	24	...	...	22,100	7,200,000	33.2
	• Yanga, 1979*	4,000	4	...	...	100	17,900	31.0
	Mengo, 1979	6,500	2	...	...	100	59,500	33.4
	Total Congo		35	118	10	77,040	153,601,600	
*Started production June 21, 1981.								
DENMARK	DUC • Dan, 1971	6,000- 6,400	9	...	9	6,800	18,000,000	30.4
	• Gorm, 1971	6,500- 7,000	5	...	1	*11,700	6,000,000	35.0
	Total Denmark		14	...	10	18,500	18,600,000	
*Average from on-stream date in May 1981.								
DIVIDED ZONE	AOC • Khafji, 1961	4,400- 6,300	104	...	16	243,000	1,846,000,000	28.2
	• Hout, 1969*	5,300-10,500	47	...	22	40,000	217,000,000	33.0
	GETTY & KOC Wafra, 1953-1961	1,100 7,000	3	276	198	101,338	1,123,087,450	18.9-23.5
	S. Fuwaris, 1963	6,300	...	4	5	1,272	17,941,066	25
	S. Umm Gudair, 1966	8,900	...	16	2	47,408	236,021,727	24.3
	Total Divided Zone		154	296	243	433,018	3,440,050,243	
*Includes some Khafji Ratawi zone crude (30-32°) mixed in with Hout field crude (38°).								
DUBAI	DUPETCO • Fateh, 1966	7,900- 9,000	23	24	4	154,252	620,206,327	31.8
	• S.W. Fateh, 1970	7,500- 9,000	6	25	8	190,213	463,272,216	30.3
	• Falah, 1972	8,100	1	6	...	9,503	8,878,236	25.5
	• Rashid, 1973	9,400-11,500	...	2	1	3,793	2,276,153	38.0
	Total Dubai		30	57	13	357,761	1,094,632,932	
ECUADOR	CEPE^(R) Ancon, 1921	4,000	...	130	523	1,710	103,972,050	35.6
	Other	...	...	160	...	360	4,717,800	...
	TEXACO Aguarico, 1968	9,850	5	1	4	9,426	24,337,937	22.0
	Atacapi, 1968	9,850	5	...	...	4,960	3,904,314	31.0
	Auca, 1970	10,300	8	14	...	15,969	27,550,658	28.0
	Lago Agrio, 1967	10,250	12	4	...	12,651	84,402,513	28.5
	Parahucu, 1968	9,850	3	...	2	2,382	2,405,443	30.0
	Sacha, 1969	10,000	39	33	16	61,393	201,767,781	28.0
	Shushufindi, 1959	9,700	3	32	19	94,952	270,961,576	30.0
	Yuca	...	7	...	...	5,220	980,518	28.0
	Culebra	...	1	...	...	219	39,627	19.5
	Yulebra	...	1	...	...	150	26,568	19.0
	CITY EXPLORATION Mariann, 1971	7,700	3	2	...	1,119	1,256,000	23.0
	Fanny, 1972	7,700	4	1	1	1,803	1,785,000	23.0
	Tarapoa, 1973	8,300	...	2	...	320	255,000	23.0
	Joan, 1974	7,500	...	...	2	...	5,000	18.0
	Total Ecuador		91	379	567	212,634	728,367,785	
*Represents 65% of production total in unit with CEPE. †Formerly named Fanny II								
EGYPT	AMOCO Abu Gharadig, 1972	9,500	...	...	...	9,721	24,454,830	36.0
	• El Morgan, 1965	...	...	...	...	...	...	...
	Kareem	5,500- 6,400	1	43	16	126,282	663,417,415	32.0
	Belayim	5,100- 5,700	0	5	2	7,516	29,022,575	27.0
	• October, 1978	11,000	7	0	2	71,090	29,154,584	28.0
	• GS-382, 1977	10,500	3	0	0	617	16,393,616	33.9
	• July, 1973	...	...	...	...	...	...	...
	Upper Rudeis	8,100	0	2	0	812	4,303,057	34.6
	Rudeis	8,600	5	7	0	81,653	144,546,679	33.7
	Nubian	10,000	0	4	3	20,086	107,280,313	31.5
	• Ramadan, 1974	11,300	9	3	3	96,399	192,964,566	31.7
	Razzak, 1972	7,700	4	6	6	6,603	40,662,978	36.0
	• SG-300, 1976	5,876	0	1	1	5,007	7,835,012	24.8
	• Shoab Ali, 1978	6,000	4	6	6	13,139	26,772,732	34.0
	• WD 33, 1972	9,800-10,800	0	1	1	640	1,530,936	32.0
	Other	...	...	...	3	...	1,585,538	...
	AGIP Belayim, 1955	7,000- 8,500	3	78	13	81,900	324,457,000	22.0
	• Belayim Marine, 1961	8,500	2	26	1	33,100	296,913,000	30.5
	PHILLIPS GROUP El Alamein, 1966	8,700	9	...	...	3,048	60,285,237	33.6
	Umbarka, 1976	10,700	4	...	...	1,253	2,248,972	43.9
	Yidma, 1971	9,000	5	...	...	3,174	16,786,318	44.0
	EGPC Amer, 1965	3,500	3	12	10	2,513	8,883,946	21.5
	Asi, 1947	3,000	3	...	9	1,357	37,567,793	21.6

WORLDWIDE PRODUCTION	Name of field, discovery date	Depth, feet	Flow	No. of wells Artificial lift	Shut-in	B'd average, first 6 mo. 1981	Cumulative, bbl, to July 1, 1981	*API gravity
	Bakr, 1958	3,200	1	49	32	4,910	64,812,948	19.0
	El-Ayoun, 1968	3,300	...	9	3	780	5,327,222	24.0
	El-Yusr, 1968	3,400-3,900	4	22	13	3,758	25,782,261	21.0
	Gharib, 1938	2,200-4,500	...	76	154	6,158	235,188,371	25.5
	Sudr, 1946	2,600	2	13	12	1,373	42,238,000	21.6
	Other	...	6	12	32	1,412	15,842,288	...
	Total Egypt		75	375	322	584,301	2,426,258,187	
FRANCE	ALSACE	Staffelfelden, 1980	6,070	...	1	6	2,510	41.0
		Other (abandoned)	...	...	...	26,368,290	...	...
	SOUTHEAST	St. Jean de Maruejols, 1947	2,460	2	...	10	9,284	11.4
		Other (abandoned)	...	...	...	...	211,778	...
	AQUITAINE BASIN	Cazaux, 1959	7,550	1	30	2	5,143	34 2-37.3
		Lavergne, 1962	11,480	...	3	2	498	41.7
		Lugos, 1956	5,250	4	19	...	4,936	20.8
		Lacq Superieur, 1949	2,170	9	26	8	967	22.3
		Montastruc, 1973	5,200	...	3	1	940	32.8
		Parentis, 1954	7,710	3	31	8	7,673	33.4
		Pecorade, 1974	10,660	5	...	4	2,333	29.3
		Castéra-Lou, ...	9,600	...	5	...	595	27.1
		Vic Bilh	7,100	4	...	6	3,725	26.6
		Other	...	1	13	2	743	...
		Abandoned	...	...	...	...	7 357	...
	PARIS BASIN	Coulommès, 1958	6,230	...	29	16	520	32.6
		Saint-Martin, 1959	4,590	1	12	1	451	33.0
		Saint-Firmin, 1960	1,800	...	37	13	882	27.5
		Châteaurenard, 1958	1,800	...	25	8	536	27.5
		Chailly	5,580	...	21	10	322	35.4
		Other	...	1	89	45	2,333	...
		Abandoned	...	...	...	...	239,850	...
	Total France		29	345	127	32,613	381,344,515	
GABON	ELF-GABON	• Anguille, 1962	8,200	11	16	...	19,121	31.2
		• Anguille NE, 1969	7,500	2	7	...	5,283	31.0
		• Anguille NNE, 1971	7,500	...	...	...	1,164	31.4
		• Batanga, 1960	6,000	1	...	...	943	43.0
		• Barbier, 1974	7,200	16	...	...	16,353	30.0
		• Brema, 1976	5,700	7	...	...	13,523	36.1
		• Clairette, 1957	9,000	...	9	...	610	29.5
		• Doree, 1974	7,200	1	...	...	453	31.4
		• Girelle, 1975	12,000	2	2	...	6,038	31.1
		• Gonelle, 1976	7,200	7	3	...	5,535	24.8
		• Grondin, 1973	7,500	10	13	...	17,234	27.4
		• Lopez Nord, 1961	5,600	2	2	...	94	23.4
		• Mandaros, 1974	6,500	8	7	...	10,315	31.0
		• Olende, 1976	6,700	6	...	...	1,950	33.5
		• P.G.S. Marine, 1978	8,200	4	...	...	2,063	32.0
		• Port Gentil Ocean, 1964	7,500	1	4	...	1,950	32.9
		• Tchengué, 1959	3,600	1	5	...	1,918	27.2
		• Tchengué Ocean, 1963	6,500	3	2	...	673	31.2
		• Torpille, 1971	9,800	14	...	...	10,693	36.4
		• Baliste, 1980	6,600	6	...	...	2,988	27.6
		• M'Bya Sud, 1981	6,700	7	...	...	2,516	35.6
		• M'Polunie, 1981	2,200	2	...	...	566	24.4
		• M'Boumba, 1980	3,700	2	...	...	723	26.4
		Other	...	...	...	...	...	25,965,518
	SHELL-ELF	Gamba, 1963	3,000	30	...	19	7,850	32.4
		Ivinga, 1967	3,100	25	...	5	9,820	32.5
	SHELL-GULF-ELF	• Lucina-Marine N., 1971	...	12	1	...	6,215	37.0
	Total Gabon		180	70	25	146,592	877,943,248	
GHANA	AGRI-PETCO	• Saltpond, 1977	8,500	3	...	3	1,691	36.0-39.0
	Total Ghana		3	3	3	1,691	1,884,691	
GREECE	N. AEGEAN PET. CO.	• Prinos, 1974*	8,000-8,800	...	...	...	27.8	...
*Production began July 5, 1981.								
GUATEMALA (e)	PETRO-MAYO S.A.	Rubelsanto, 1974	5,300-7,000	NA	NA	NA	...	26.0-32.0
		West Chinaja, 1977	3,200-3,800	NA	NA	NA	5,000	...
	Total Guatemala			NA	NA	NA	5,000	3,965,000
INDIA (e)	GUJARAT STATE	Ankleshwar, 1960	2,953-3,937	...	...	...	...	...
		Bakrol, 1968	4,593-4,921	...	...	...	...	...
		Kadi, N., 1968	2,953-3,909	...	...	...	...	...
		Kadi, S., 1968	5,906-6,562	...	...	...	...	...
		Kalol, 1961	4,265-5,250	...	...	...	...	...
		Kathana, 1965	5,250-5,906	...	...	...	...	...
		Kholka, 1966	4,265-5,577	...	...	...	...	...
		Kosamba, 1963	1,968-2,625	...	1,600	290,000	950,426,000	22.0-48.0
		Nawagam, 1963	4,429-6,652	...	...	...	...	...

WORLDWIDE PRODUCTION	Name of field, discovery date	Depth, feet	Flow	No. of wells Artificial lift	Shut-in	B/d average, first 6 mo. 1981	Cumulative, bbl, to July 1, 1981	*API gravity
ASSAM STATE	Sanand, 1963	4,265- 4,593	...	...	...	...	...	...
	Sobhasen, 1968	4,429- 5,906	...	...	...	...	...	...
	Wovel, 1963	4,265- 4,593	...	...	...	...	...	...
	Digboi, 1890	300-7,500	...	...	...	...	...	...
	Geleki, 1968	12,632-12,795	...	...	...	...	...	...
	Lakwa, 1965	8,038-12,795	...	...	...	...	...	...
	Moran, 1958	11,000	...	...	...	...	...	...
	Nahorkatiya, 1953	9,500	...	...	...	...	...	...
	Rudrasagar, 1961	10,171-10,500	...	...	...	...	...	...
	Bombay High, 1974	4,530-4,630	...	...	...	...	...	...
MAHARASHTRA STATE	Total India		1,600	290,000	950,426,000			
INDONESIA PERTAMINA ⁽⁸⁾	Rantau, 1929	3,156	...	...	...	...	...	56.6
	Paluh Tabuhan Timur, 1937	3,868	...	...	...	...	...	51.9
	Sungai, 1973	5,758	...	...	...	...	...	52.8
	Gobang, 1960	1,845	...	...	...	...	...	60.8
	Tanjung Tiga, 1948	4,600	...	...	...	...	...	27.3
	Talang Jimar, 1937	4,200	...	...	...	...	...	28.4
	Liman, 1928	4,950	...	...	...	...	...	27.6
	Belimbing, 1964	5,280	...	...	...	...	...	27.2
	Benakat Timur, 1974	2,786	...	...	...	...	...	27.2
	Tempino, 1931	2,700	...	...	...	...	...	42.1
	Kenali Asam, 1931	3,800	...	...	...	...	...	31.8
	Ogan, 1956	4,313	...	...	...	...	...	28.3
	Benuang, 1948	7,382	...	...	...	...	...	57.5
	Bekasap, 1955	2,500	...	...	...	...	...	32.8
	Bekasap South, 1968	3,500	...	...	...	...	...	34.1
	Benar, 1973	2,200	...	...	...	...	...	31.7
	Cebakan, 1975	4,700	...	...	...	...	...	30.2
	Intan, 1977	3,867	...	...	...	...	...	32.9
	Kopar, 1974	5,664	...	...	...	...	...	33.3
	Kotabatak, 1952	4,700	...	...	...	...	...	27.6
	Libo, 1968	6,077	...	...	...	...	...	41.6
	Libo SE, 1973	5,900	...	...	...	...	...	42.7
	Menggala North, 1968	3,600	...	...	...	...	...	32.4
	Menggala South, 1968	4,000	...	...	...	...	...	33.7
	Minas, 1944	2,400	...	...	...	...	...	35.2
	Mutiara, 1976	3,494	...	...	...	...	...	34.0
	Obor, 1978	7,148	...	...	...	...	...	39.8
	Pager, 1974	4,425	...	...	...	...	...	37.5
	Pelita, 1977	7,497	...	...	...	...	...	39.8
	Pomatang, 1959	2,800	...	...	...	...	...	31.7
	Pematang Bow, 1969	5,000	...	...	...	...	...	36.6
	Porkebunan, 1977	2,334	...	...	...	...	...	29.3
	Petani, 1964	4,700	...	...	...	...	...	32.9
	Petapahan, 1971	4,300	...	...	...	...	...	27.8
	Pinang, 1971	3,950	...	...	...	...	...	28.9
	Pinggir, 1972	3,200	...	...	...	...	...	34.8
	Pudu, 1972	5,500	...	...	...	...	...	35.7
	Pungut, 1951	2,800	...	...	...	...	...	37.4
	Rangau, 1969	6,000	275	2,030	1,712	854,500	6,203,937,000	40.6
	Seruni, 1975	3,150	...	...	...	...	...	29.5
	Sikladi, 1975	4,500	...	...	...	...	...	34.3
	Singa, 1976	3,238	...	...	...	...	...	...
	Sintong, 1971	2,400	...	...	...	...	...	32.2
	Jatibarang, 1940	4,680	...	...	...	...	...	31.1
	Comara, 1976	8,200	...	...	...	...	...	37.0
	Bunyu, 1923	6,181	...	...	...	...	...	31.7
	Tanjung, 1938	4,734	...	...	...	...	...	39.9
	Sangata, 1970	4,467	...	...	...	...	...	38.6
	Tapian Timur, 1967	8,202	...	...	...	...	...	...
	Klamono, 1936	500	...	...	...	...	...	18.5
	Other	...	...	...	...	...	...	...
CALTEX ⁽⁹⁾	Aman, 1974	3,280	...	...	...	...	...	37.5
	Balam SE, 1973	4,370	...	...	...	...	...	30.4
	Balam South, 1969	1,500	...	...	...	...	...	33.1
	Bangka, 1970	1,500	...	...	...	...	...	34.2
	Suram, 1971	1,700	...	...	...	...	...	27.8
	Topaz, 1977	5,149	...	...	...	...	...	33.3
	Tandun, 1969	3,000	...	...	...	...	...	32.7
	Telinga, 1975	4,703	...	...	...	...	...	38.8
	Ubi, 1976	4,847	...	...	...	...	...	32.7
	Duri, 1941	600	...	...	...	...	...	19.7
	Kulin, 1970	1,400	...	...	...	...	...	13.2
	Sebanga, 1940	1,458	...	...	...	...	...	...
	Lindai, 1971	1,131	...	...	...	...	...	30.8
	Menggala S., 1968	4,000	...	...	...	...	...	33.7
	Ujung Tanjung, 1975	2,501	...	...	...	...	...	30.3
	Kasikan, 1972	830	...	...	...	...	...	27.8
	Terantam, 1973	851	...	...	...	...	...	31.6
	Damar, 1974	5,707	...	...	...	...	...	34.8
	Podada, 1973	945	...	...	...	...	...	31.1
	Sabak, 1974	2,398	...	...	...	...	...	35.5
	Langak, 1976	1,500	...	...	...	...	...	31.8
	Other	...	...	...	...	...	...	...

WORLDWIDE PRODUCTION	Name of field, discovery date	Depth, feet	Flow	No. of wells Artificial IR	Shut-in	B/d average, first 6 mo. 1981	Cumulative, bbl, to July 1, 1981	*API gravity
STANVAC (Central Sumatra)	Sago, 1940	1,800	...	70	33	3,079	115,023,915	33.9
	Lirik, 1939	1,600	...	40	26	2,310	33,537,576	34.2
	Molek, 1956	2,600	...	21	10	1,174	9,554,696	34.2
	N. Pulau, 1951	1,800	...	23	36	1,585	34,657,614	34.2
	C. Pulau, 1970	1,800	...	11	2	...	70,331	33.7
	S. Pulau, 1941	1,800	...	11	17	513	3,601,253	34.0
	Pondok, 1959	1,800	...	...	4	...	134,304	34.1
	Bimo, 1972	1,617	...	23	12	1,442	9,647,798	34.0
	Pekan, 1976	3,671	...	30	8	2,104	4,042,897	35.0
	Merbau, 1979	2,952	...	21	7	3,247	1,981,930	35.7
	Kerumutan, 1980	3,180	...	11	3	1,922	708,412	35.2
	K. Ara, 1980	3,944	...	3	3	259	50,122	35.5
	N. Merbau, 1980	3,165	...	8	4	1,309	387,242	34.1
	Panduk, 1981	2,651	2	1	2	224	40,505	45.6
	Other	...	...	10	27	279	10,447,090	...
STANVAC (South Sumatra)	Talang Akar, 1922	2,800	1	26	452	622	243,697,410	35.3
	Benakat, 1932	1,600	...	60	195	2,161	130,622,831	35.1
	Selo, 1938	2,998	...	...	21	...	492,482	37.2
	Jirak, 1930	900	...	30	220	708	55,428,198	35.1
	Raja, 1940	6,000	23	5	43	4,771	24,083,326	38.1
	Abab, 1951	6,000	15	19	81	3,884	35,869,003	36.2
	Dewa, 1971	7,675	6	4	30	506	7,658,185	37.9
	Ibul, 1970	5,600	4	11	24	1,191	18,009,582	36.1
	Rambutan, 1972	4,750	11	2	9	543	2,644,119	42.1
	N. Kruh, 1980	4,299	1	1	5	195	227,381	41.7
	Sukaraja, 1980	7,024	2	3	1	951	194,482	35.1
	Other	...	11	18	291	832	125,729,690	...
ARCO (Java Sea)	• Ardjuna, 1969	2,380-7,250	74	60	12	121,642	317,649,700	37.0
	• Arimbi, 1972	2,943	1	9	1	4,963	15,516,751	33.0
ARCO (N.E. Kalimantan)	Sembakung, * 1976	2,600	15	...	1	9,540	10,165,376	36.0
	Bangkudulis, 1980	3,250	...	...	1	470	85,045	39.5
*With Phillips.								
PHILLIPS GROUP ROY M. HUFFINGTON INC.	Salawati, 1976	5,749	...	6	5	4,422	21,365,383	39.2
	Badak, 1972	5,800-8,500	29	4	3	7,250	23,470,015	38.0
	Nilam, 1974	8,200-9,400	7	...	...	4,000	1,508,490	32
	Pamaguan, 1974	2,000-4,600	7	3	4	1,350	1,561,234	30
	Badak, 1972 ^(c)	3,500-14,500	39	...	6	11,950	17,204,126	48
	Nilam, 1974 ^(c)	7,600-13,100	...	...	48	...	11,188	48
	Seberah, 1973 ^(c)	2,800-8,900	...	...	5	...	564,953	58
TOTALINPEX	• Bekapai, 1972	5,728	30	...	10	32,000	95,168,440	40.5
	• Handil, 1974	7,543	90	...	22	168,000	291,333,378	31.3
UNION OIL	• Attaka, * 1970	7,500	54	...	9	82,095	300,872,274	43.0
	• Melahin, 1972	7,500	5	...	1	1,294	3,902,926	26.0
	• Kerindingan, 1972	7,000	6	...	2	940	3,744,405	31.0
	• Sepinggan, 1973	11,150	13	...	1	7,599	27,851,240	35.0
	• Yakin, 1976	5,100	9	...	3	1,909	4,606,887	18.0
*With Inpex								
AARNL ^(e) ASAMERA	Bula, 1971	850	...	23	37	700	2,308,000	22.0
	Tempino, 1931	2,700	4	2	4	450	362,000	38.7
	Tualang, 1973	3,137	14	9	24	4,588	22,355,000	50.6
	Peudawa, 1980	2,200	5	1	6	1,016	763,000	47.7
	Kluang, 1913	2,600	1	10	42	478	563,000	44.5
	Mangunjaya, 1934	2,300	2	7	88	455	481,000	22.0
	Peutouw, 1980*	2,900	6	...	1	...	54.8	...
	Other	...	...	...	...	783	29,217,000	...
*Began production in August 1981 at rate of 1,000 b/d								
CONOCO GROUP HAPCO	• Udang, 1974	5,595	20	...	5	28,046	18,100,000	40.0
	• Cinta, 1970	3,500	35	...	...	23,760	134,400,000	34.0
	• Gita, 1972	7,000	6	...	...	2,880	4,100,000	34.5
	• Kitty, 1973	2,700	6	...	...	2,240	10,100,000	18.0
	• Nora, 1973	3,200	5	...	...	1,300	6,700,000	29.0
	• Rama, 1974	3,200	28	4	4	17,130	64,900,000	31.0
	• Selatan, 1971	4,000	16	...	1	6,650	14,400,000	19.5
	• Zelda, 1971	7,500	9	3	...	9,390	7,800,000	35.0
	• Krisna, 1979	4,500	15	...	1	44,070	10,900,000	35.0
	• Yvonne, 1980	4,500	2	...	...	610	100,000	36.0
	Arun	10,356	13	...	5	69,352	67,249,000	54.7
MOBIL OIL ^(c) PETROMER TREND	Canderawasih, 1976	3,500	...	7	...	1,737	8,208,133	28.1
	Jaya, 1973	3,050	...	10	...	4,836	28,432,568	41.4
	Kasim, 1973	3,350	...	13	...	5,849	30,788,695	37.4
	Walio, 1975	2,750	...	141	...	32,715	93,700,171	33.8
	Moi, 1979	4,731	...	4	...	302	201,209	19.4
	Kasim Barat, 1975	4,412	...	3	...	232	2,021,050	33.3
	Kasim Tengah, 1974	4,400	...	1	...	...	3,891	33.0
	Kasim Utara, 1975	5,058	...	3	...	253	7,553,393	26.4
	Klasera, 1981	2,900	...	1	...	60	7,324	32.5
	Other	...	...	...	...	...	...	...
TESORO ^(e)	Samboja, 1916	1,600	...	...	...	...	...	41.3
	Sanga Sanga, 1893	1,564	21	262	1,246	7,000	526,812,000	28.7
	Tarakan, 1906	3,943	...	...	...	...	...	18.1
LEMIGAS ^(e)	Other	...	...	...	...	...	...	...
	All fields	...	3	69	340	560	129,799,000	...
Total Indonesia			941	3,136	5,216	1,617,177	9,421,398,619	...

WORLDWIDE PRODUCTION	Name of field, discovery date	Depth, feet	Flow	No. of wells Artificial lift	Shut-in	B-D average, first 6 mo. '83	Cumulative, bbl. to July 1, 1981	*API gravity
IRAN(e)								
NIOC	Agha Jari, 1936	7,440	...	...	...	...	...	34.0
	Ahwaz Asmari, 1958	8,150	...	...	...	...	...	32.0
	Ahwaz Bangestan, 1958	12,000	...	...	...	...	...	24.3
	Bibi Hakimeh, 1961	4,570	...	...	...	...	...	29.9
	Binak, 1959	10,440	...	...	...	...	...	29.9
	Chilingar, 1974	3,350	...	...	...	...	...	39.3
	Cheshmeh Khush, 1967	10,700	...	...	...	...	...	27.7
	Dehliuran, 1972	11,900	...	...	...	...	...	34.3
	Gachsaran, 1937	3,400	...	...	...	...	...	31.0
	Haft Kel, 1927	1,980	...	...	...	...	...	37.7
	Karanj, 1963	5,360	...	...	...	...	...	33.9
	Kharg, 1961	10,900	...	...	...	...	...	31.6
	Kupai, 1965	10,500	...	...	...	...	...	32.8
	Lab-e Safid, 1968	4,350	...	...	...	...	...	35.3
	Mansuri, 1963	7,100	...	...	...	...	...	28.4
	Marun, 1963	9,400	...	...	...	...	...	32.6
	Masjid-e Suleiman, 1908	1,600	...	...	...	...	...	39.3
	Naft Safid, 1938	5,000	...	...	...	1,517,000	29,881,489,000	36.8
	Paris, 1964	4,670	...	...	...	...	...	38.8
	Par-e Siah, 1964	4,250	...	...	...	...	...	37.7
	Pazanan, 1961	7,250	...	...	...	...	...	37.2
	Rag-e Safid, 1964	7,230	...	...	...	...	...	28.6
	Ramin, 1966	12,200	...	...	...	...	...	32.9
	Ramshir, 1962	8,750	...	...	...	...	...	27.6
	Sulabedar, 1971	3,400	...	...	...	...	...	30.4
	Naft-e Shah, 1923	2,000-3,000	...	...	...	...	...	43.0
	SIRIP	Bahregansar, 1960	9,000	...	...	...	...	30.0
		Hendijan, 1968	11,000	...	...	...	...	23.0
		Nowruz, 1966	8,200	...	...	...	...	21.0
	(MINOCO)	Rakhs, 1969	7,650	...	...	...	...	35.8
		Rostam, 1966	7,000	...	...	...	...	34.4
	AMOCO	Ardeshtir, 1969	2,800	...	...	...	...	27.0
		Cyrus, 1962	7,000	...	...	...	...	18.3
		Darius, 1961	11,000	...	...	...	...	34.0
		Fereidoon, 1966	7,000	...	...	...	...	28.5
	LAPCO	Sassan, 1965	7,500-8,100	...	...	...	...	34.0
Total Iran						1,517,000	29,881,489,000	
IRAQ(e)								
	Ain Zalah, 1939	5,200-6,500	...	...	...	...	...	31.0
	Bai Hassan, 1953	4,800-5,400	...	...	...	...	...	34.0
	Butmah, 1953	3,900	...	...	...	...	...	30.0
	Hamrin, 1973	2,000	...	...	...	...	...	...
	Jambur, 1954	5,500-12,500	...	...	...	...	...	38.0
	Kirkuk, 1927	2,800-4,200	280	...	...	800,000	15,704,240,000	36.0
	Naft Khaneh, 1909	3,500	...	...	...	...	...	42.5
	Rumaila North, 1958	10,000	...	...	...	...	...	34.0
	Rumaila, 1953	10,800	...	...	...	...	...	35.0
	Zubair, 1949	11,000	...	...	...	...	...	34.2
	Abu Ghurab	...	...	...	...	...	...	27.7
	Buzurgan	...	...	...	...	...	...	27.7
	Jabal Fauqi	...	...	...	...	...	...	...
	Lahis	...	...	...	...	...	...	...
Total Iraq						800,000	15,704,240,000	
ISRAEL(e)								
LAPIDOTH	Heletz-Brur, 1965	5,200	...	11	9	223	12,010,850	28.0
	Kochav, 1963	5,500	...	5	3	67	3,997,750	27.0
Total Israel						16	12	290
						290	16,008,600	
ITALY								
AGIP	Cavone, 1979	10,663-16,068	2	...	6	449	301,808	24.8
	Gela, 1956	11,280-11,350	45	14	20	9,887	100,672,662	6.6-16.4
	Malossa, 1973	17,881-21,231	8	...	3	15,824	16,323,908	55.0
	Pisticci-S. Cataldo, 1960	6,820-6,880	6	...	3	672	5,549,962	11.4
	Other	...	11	1	23	275	11,340,216	...
	Ragusa, 1954	5,690-5,860	...	30	13	4,343	115,951,773	19.5
AGIP/SOMICEM	Nilde, 1977	6,068	1	...	...	2,989	540,975	39.3
AGIP/SHELL	Santa Maria a Mare, 1974	8,487	5	...	2	5,298	9,127,180	21.5
Total Italy						78	45	70
						39,737	258,808,484	
IVORY COAST								
Esso Cote d'Ivoire	Belier, 1975*	6,500	9	...	2	7,575	1,941,000	33
Total Ivory Coast						9	...	2
						7,575	1,941,000	
JAPAN								
JAPEX	Higashi-Niigata, 1965	4,500-9,200	22	...	2	396	6,267,830	53.9
	Sarukawa, 1958	2,000-3,200	6	34	10	633	9,203,774	32.3
	Yoshit, 1968	8,000	12	...	13	1,459	6,184,575	61.8
	Other	...	107	4	55	1,270	25,431,241	...
	Aga-Oki, 1972	7,590	16	...	8	1,044	3,025,389	43.7
TEIKOKU OIL	Kubiki, 1959	1,100-6,400	27	53	67	216	11,713,508	29.7

*Development drilling still in progress.

WORLDWIDE PRODUCTION	Name of field, discovery date	Depth, feet	Flow	No. of wells Artificial lift	Shut-in	B/d average, first 6 mo. 1981	Cumulative, bbl. to July 1, 1981	*API gravity	
	Minami-Aga, 1964	7,300- 9,600	11	1	14	511	12,453,033	38.5	
	Yabase, 1933	1,100- 5,800	5	57	12	309	32,241,270	33.0	
	Other		6	21	5	98	2,309,381		
	Total Japan		212	170	186	5,936	108,830,001		
KUWAIT(e)	KOC	Ahmadi, 1953	4,800	62	22			32.9	
		Bahra, 1956	8,500		3				
		Burgan, 1938	4,800	310	86			32.0	
		Magwa, 1951	4,800	84	23			33.6	
		Minagish, 1959	10,000	9	6	1,106,000	20,423,226,000	34.2	
		Raudhatain, 1955	8,600	38	14			34.7	
		Sabriya, 1956	8,300	19	37			31.5	
		Umm Gudair, 1963	9,000	24	7			26.7	
	Total Kuwait		546	198		1,106,000	20,423,226,000		
Well status as of 1/1/1981									
LIBYA	AGIP	Bu Attifel, 1968	14,300	16	14	118,800	457,355,000	41.0	
	AQUITAIN	Majid, 1968	9,000- 9,800	4	0	5,400	18,018,000	40.0	
		Don Mansour Unit	2	3	1,400	22,389,000	32		
		El Meheiriga	3	1	7,900	22,283,000	46		
	ESSO LIBYA	Arshad, 1966	10,100	2	6	847	7,179,084	42.0	
		Jebel, 1962	8,100	11	20	9,588	153,625,999	38.0	
		Nasser, 1959	5,500- 7,600	4	93	105	62,457	1,964,203,355	38.0
		Lehi-Dor Marada Unit, 1965	9,500	6	15	9,321	75,562,413	50.0	
		Other					9,110,257		
	ESSO SIRTE	Raguba, 1961	5,400	17	1	49	26,462	544,528,853	43.0
	LNOC (e)	Bieda, 1959	4,000					36.0	
		Bualawn, 1972	6,000					40.0	
		Dor, 1967	6,400					33.2	
		Kotlia, 1963	5,500	NA	NA	NA	370,000	2,665,000,000	34.0
		Sahabi B., 1961	9,000					39.0	
		Sahabi D., 1968	10,000						
		Sarir, 1961	9,000					37.2	
	MOBIL	Amal, 1959	9,900	1	65	109	60,169	685,781,000	37.5
		Ora, 1962	7,250	4	29	38	7,675	95,847,000	40.2
		Ghani, 1977	6,000	18	21	36	400	7,678,000	40.0
		Other		2	7	107	2,811	108,147,000	
	OASIS	Bahi, 1968	3,600- 3,750	47			34,656	314,729,000	43.4
		Beihedan, 1962	7,000	4					33.6
		Dahra, 1959	3,100- 3,700	52		25,095	422,356,000	37.0-41.0	
		Defa, 1969	5,400- 5,900	92		206,844	771,768,000	35.6	
		Gialo, 1961	2,200- 6,300	206		173,748	1,685,843,000	35.7	
		Harash, 1978	7,400	3		5,494	6,720,000	34.6	
		Khalifa,* 1978	5,400- 7,000	2				34.6	
		Masrabt, 1978	10,000	3				39.6	
		Samah, 1961	9,000	7		18,386	336,246,000	33.4	
		Waha, 1960	6,600	45		69,816	798,854,000	36.0	
		Zagut, 1962	6,000	3		1,961	21,564,000	35.4	
*Included with Samah. †Included with Gialo.									
	OCCIDENTAL	Ali, 1975	3,900	0	1	1	1,088	4,216,684	50.0
		Aimas, 1975	4,000	0	7	1	3,310	14,547,626	49.5
		Intisar A, 1967	9,750	8	0	11	36,872	654,070,826	45.0
		Intisar B, 1974	9,600	2	0	0	1,323	4,792,103	50.0
		Intisar C, 1967	9,650	0	2	4	1,620	84,289,108	37.5
		Intisar D, 1967	9,400	16	0	10	60,261	903,220,457	39.0
		Intisar E, 1968	5,300- 7,100	0	7	4	4,125	10,697,033	34.7
		Nafoura-Augila, 1966	2,200-10,000	0	39	16	54,177	739,012,544	35.5
		Aswad, 1978	6,250	6	0	0	6,565	6,519,943	46.0
		Sabah, 1977	5,500	2	15	1	31,218	25,797,087	42.0
		Zella, 1977	6,750	34	0	0	34,299	25,762,345	48.1
		Other	7,800- 8,900	0	1	2	371	1,330,964	40.4
	Total Libya			158	731	568	1,489,679	13,669,044,681	
MALAYSIA	ESSO MALAYSIA	Bekok, 1976	5,500			22,500	16,200,000	47.6	
		Pulai, 1973	4,300	56		25,000	33,900,000	43.3	
		Tapis, 1975	6,700			69,800	67,300,000	43.3	
		Tembungo, 1971	6,000			3,100	15,500,000	37.6	
	SARAWAK SHELL BERHAD	Bakau, 1971	11,000	2	1	200	5,900,000	39.0	
		Baram, 1963	9,500	15	18	7,300	99,800,000	40.5	
		Baronia, 1967	11,000	23	17	28,000	97,600,000	42.0	
		Betty, 1967		9		21,000	19,200,000	38.0	
		Fairley-Baram, 1963		2		1,200	15,800,000	40.0	
		West Lutong, 1966		13		13,300	96,900,000	39.5	
		Miri, 1911					80,000,000	27.0	
		Temana, 1972		10		10,300	4,500,000	35.0	
		Tukau, 1966		28	4	18,200	40,800,000	29.2	
	SABAH SHELL	Semarang, 1972		55	5	46,100	122,800,000	37.0	
		South Furious, 1974		4		5,000	2,100,000	30.0	
	Total Malaysia			217		57	268,000	710,000,000	

WORLDWIDE PRODUCTION	Name of field, discovery date	Depth, feet	Flow	No. of wells Artificial lift	Shut-in	B/d average, first 6 mo. 1981	Cumulative, bbl. to July 1, 1981	*API gravity
MEXICO	PEMEX							
	NORTH ZONE, NE	Monterrey, 1950	6,950	2	8	315	11,639,387	47.0
		Other	...	2	18	44	20,697,786	...
	NORTH ZONE, N	• Arenque, 1970	11,362	19	...	10	9,158	26.0
		Constituciones, 1956	6,350	54	86	9,913	62,428,854	17.0
		Ebano-Pánuco, 1901	1,450	73	127	85	933,953,736	12.0
		Tamaulipas	4,200	70	70	92	60,586,186	19.0
		Other	...	97	102	94	22,472,547	...
	NORTH ZONE, S.	Chicontepec, 1973	4,264	35	5	61	4,435,790	34.1
		• Isla de Lobos, 1963	6,875	2	...	...	585	40.0
		• Marsopa, 1974	10,198	7	...	3	2,711	39.0
		Naranjos C. Azul, 1909	1,800	197	...	22	8,492	22.0
		Tres Hermanos, 1959	6,960	27	...	59	2,843	21.0
		Other	...	83	23	52	811	...
	CENTRAL ZONE, POZA RICA	• Atun, 1966	9,040	5	...	8	1,931	37.0
		• Bagre, 1973	10,919	7	...	2	7,114	33.0
		Escolin, 1942	7,216	...	89	75	17,977	26.3
		Hallazgo, 1955	10,170	...	34	32	3,954	25.0
		Jiliapa, 1958	7,390	...	38	34	1,094	34.0
		Mecatepec, 1941	7,544	1	46	28	2,931	29.8
		Miquetla, 1959	6,480	8	54	41	2,610	35.0
		Poza Rica, 1930	7,090	5	147	85	34,287	35.0
		Pres. Alemán, 1949	8,036	66	52	69	4,548	26.0
		Remolino, 1962	10,745	...	40	41	1,195	29.5
		San Andrés, 1956	10,410	9	104	100	22,531	29.0
		Other	...	85	160	212	9,944	...
	CENTRAL ZONE, N. FAJA DE ORO	Acuatempa, 1955	4,085	8	...	14	371	21.0
		El Muro, 1965	3,966	9	...	3	1,686	17.0
		E. Ordóñez, 1952	5,220	10	...	8	1,252	21.0
		Ocotepc, 1953	3,737	12	...	3	415	20.0
		Santa Agueda, 1953	4,780	17	...	37	1,528	16.0
		Other	...	46	9	71	1,780	...
	CENTRAL ZONE, VERACRUZ	Matapionche, 1974	11,129	34	...	18	11,335	37.0
		Other	...	56	...	63	3,220	...
	SOUTHERN ZONE, AGUA DULCE	Blasillo, 1967	7,216	18	12	21	6,045	40.0
		Cinco Presidentes, 1960	6,862	9	74	49	13,498	35.0
		El Burro, 1931	2,200	...	17	13	994	26.0
		La Venta, 1954	4,730	7	20	58	1,812	41.0
		Ogarrio, 1957	5,790	16	59	22	9,328	38.0
		Otates, 1965	7,469	5	6	2	1,340	39.0
		Rodador, 1971	11,398	6	14	5	2,352	26.0
		Sánchez Magallanes, 1957	4,240	7	100	173	8,479	27.0
		San Ramón, 1967	9,517	7	33	13	5,183	30.0
		Tonalá, 1928	1,770	...	58	14	1,415	28.0
		Other	...	...	2	5	107	...
	SOUTHERN ZONE, COMALCALCO	Agave, 1977	13,450	13	...	1	52,742	41.7
		Arroyo Zanapa, 1978	14,599	1	...	1	4,170	38.9
		Arteza, 1977	11,800	2	...	8	4,648	26.4
		Ayapa, 1972	8,200	3	...	2	761	7.2
		Cacho López, 1977	14,250	...	...	...	0	39.0
		Cactus, 1972	14,100	21	...	15	51,515	31.5
		Carrizo, 1962	3,500	1	6	7	679	23.3
		Castarrical, 1967	10,080	1	25	27	2,717	29.3
		Comoapa, 1979	14,432	3	...	1	6,491	44.5
		Copano, 1977	11,890	3	...	...	4,145	43.9
		Cunduacán, 1974	13,775	15	...	20	106,364	28.9
		El Golpe, 1963	3,500	6	41	36	5,982	25.7
		Giraldas, 1977	15,225	10	...	...	41,432	37.0
		Irde, 1974	13,775	13	...	1	61,170	28.5
		Mecoacán, 1957	2,200	10	13	10	1,208	8.6
		Mundo Nuevo, 1977	11,800	4	...	...	14,247	46.0
		Nispero, 1974	14,100	9	...	5	57,780	34.4
		Ojacaque, 1977	11,150	10	...	15	47,313	29.1
		Paredón, 1978	15,690	7	...	1	26,569	39.8
		Platanal, 1978	15,900	1	...	1	1,510	30.2
		Rio Nuevo, 1975	14,950	7	...	...	31,884	34.8
		Samaria (Cret), 1973	14,209	44	...	11	289,189	31.0
		Santuario, 1966	9,617	6	11	6	5,007	37.0
		Sitio Grande, 1972	13,766	18	...	2	75,958	35.0
		Sunuapa, 1978	12,887	3	...	4	4,044	32.8
		Tintal, 1968	5,904	6	...	6	560	22.0
		Topan, 1978	11,172	1	...	2	730	25.4
		Tupilco, 1959	9,685	10	27	21	4,239	27.0
		Other	...	8	3	27	41,998	...
	SOUTHERN ZONE, EL PLAN	Agata, 1956	3,830	1	7	8	477	34.0
		Bacal, 1976	3,500	22	6	8	35,973	35.0
		Concepción, 1974	1,600	5	6	4	1,327	31.0
		Cuichapa, 1935	2,200	11	70	30	8,894	30.0
		El Plan, 1931	1,700	...	41	15	3,070	30.0
		Lacamango, 1973	1,700	14	10	4	2,774	26.3
		Los Soldados, 1953	4,492	5	12	7	1,201	32.0
		Other	...	1	28	13	533	...
							37,104,118	

WORLDWIDE PRODUCTION	Name of field, discovery date	Depth, feet	Flow	No. of wells Artificial lift	Shut-in	R/d average, first 6 mo. 1981	Cumulative, bbl. to July 1, 1981	*API gravity	
SOUTHERN ZONE, NANCHITAL	Ixhuatlán Ole., 1965	1,960	7	20	8	1,812	7,836,032	22.6	
	Molacán, 1962	500	5	176	60	3,183	16,725,431	22.3	
	Other	...	...	2	10	107	17,460,171	...	
	Total Mexico		1,482	2,111	2,295	2,383,745	8,332,441,852		
GULF OF CAMPECHE	• Cantarell, 1976	8,528	44	...	2	1,044,605	431,893,189	21.3	
	• Abkatun	...	5	...	...	61,252	11,673,831	...	
	• Ku	...	4	...	...	32,557	5,893,088	...	
	• Pol	...	1	...	...	14,385	2,603,670	...	
MOROCCO(e)									
	Haricha, 1957	3,000	...	...	...	180	3,046,550	40.0	
	Other	...	...	...	...	...	12,554,000	...	
	Total Morocco					180	15,600,550		
NETHERLANDS	SHELL/ESSO DeLier-Munster, 1955	5,200	31	6	956	15,127,668	33.2		
	Yssel-Ridderkerk, 1956	5,200	62	3	5,299	77,237,017	18.0		
	Schoonebeek, 1943	2,500	328	142	13,715	199,547,649	24.8		
	Wassenaar, 1956	4,200	33	2	2,848	41,219,924	18.6		
	Zoetermeer, 1957	3,200	16	4	831	8,431,800	16.4		
	Pynacker, 1955	...	6	...	298	5,305,669	36.3		
	Other	...	40	47	184	4,514,480	...		
	Total Netherlands		516	204	24,131	351,384,207			
NEW ZEALAND									
SHELL-BP-TODD	Kapuni, 1959	10,318-11,775	10	...	1	5,094	24,617,000	54.0	
MAUI DEVELOPMENT LTD.	• Maui, 1969	8,615-11,068	6	...	1	4,354	2,914,000	58.0	
	Total New Zealand		16	...	2	9,448	27,531,000		
NIGERIA	AGIP-PHILLIPS Akri, 1973	9,600-10,600	8	...	4	12,800	39,256,000	39.9	
	Akri West, 1975	9,900-10,200	...	...	2	...	482,000	31.4	
	Ashaka, 1968	9,700-12,000	1	...	...	900	1,022,000	41.0	
	Beniku, 1974	12,000	1	...	1	1,600	1,843,000	44.3	
	Ebegoro, 1976	11,500-12,000	4	...	4	13,000	35,997,000	35.7	
	Ebocha, 1965	8,000-10,900	13	...	7	10,500	88,810,000	38.5	
	Gifti-Gifti, 1967	7,600-14,000	2	...	2	1,125	802,830	47.4	
	Idu, 1973	7,750-10,700	9	...	3	4,000	23,197,000	28.0	
	Kwale, 1968	10,000-11,500	1	...	1	700	595,000	44.3	
	M'Bede, 1966	7,300-9,400	12	2	2	17,000	124,341,000	41.1	
	Obama, 1975	11,600-14,300	7	...	...	24,100	49,055,000	38.2	
	Obiafu, 1973	9,300-12,200	14	...	...	13,700	54,551,000	41.3	
	Obrikom, 1973	8,000-10,000	4	...	7	6,600	41,022,000	41.5	
	Odugri, 1972	12,500	2	...	...	3,700	5,533,000	44.8	
	Ogbogene, 1976	11,500-12,500	...	1	1	900	3,054,000	37.0	
	Okpai, 1968	10,000-12,000	3	...	2	5,100	6,126,000	42.3	
	Omoku West, 1975	11,500	1	...	...	1,400	3,184,000	35.0	
	Oshi, 1974	9,600-11,300	7	...	2	10,700	40,711,000	39.5	
	Tebidaba, 1975	10,300-13,300	10	...	1	21,500	69,739,000	35.5	
	Umuoru, 1975	14,100	1	...	...	500	369,000	43.0	
	Agwe, 1977	10,800	1	...	...	800	139,000	55.0	
	ASHLAND	Izombe, 1974	9,500	8	...	3	10,225	18,558,882	43.2
	Ossu, 1974	9,500	1	...	3	450	961,558	44.0	
	ELF	Aghigo, 1972	6,000-8,500	1	4	5	3,398	12,100,600	24.6
	Okpoko, 1967	6,000-7,500	2	1	5	1,932	12,056,250	19.0	
	Obodo-Jatumi, 1966	6,000-11,000	9	...	1	10,240	32,038,990	29.0	
	Upomami, 1965	6,000-7,000	1	6	1	2,812	8,987,000	17.5	
	Obagi, 1964	6,000-10,000	28	3	9	54,096	213,232,000	24.0	
	Erema, 1972	9,800	1	...	...	1,303	3,085,300	30.0	
	GULF	Abiteye, 1970	5,750-9,400	14	...	3	21,073	33,853,175	37.8
	• Delta, 1965	5,600-9,500	22	...	5	30,321	123,934,419	34.0	
	• Delta South, 1965	7,100-10,179	20	...	7	32,688	207,061,419	38.6	
	• Isan, 1970	5,900-9,000	8	...	3	5,493	34,085,901	39.4	
	Makaraba	7,100-12,005	18	2	3	19,928	36,680,283	31.5	
	• Malu, 1969	4,800-6,300	14	...	4	21,949	60,495,258	40.0	
	• Mefa, 1965	8,570-12,030	4	...	1	3,814	8,364,557	37.1	
	• Meji, 1965	5,200-10,900	18	...	3	25,517	108,243,326	32.9	
	• Meren, 1965	5,000-7,500	36	...	14	63,638	371,229,324	31.3	
	• Okan, 1964	5,500-9,245	65	...	11	62,399	338,106,655	36.0	
	• Parabe/Eko, 1968	4,500-8,200	16	...	8	11,969	81,278,021	36.7	
	Utonana, 1971	7,400-9,165	3	...	1	1,962	4,663,661	35.6	
	• W. Isan, 1971	7,825-10,229	9	...	...	10,485	24,668,018	38.1	
	Yorla South, 1974	11,389-12,635	...	...	2	...	822,618	42.0	
	Jisike, 1975	6,300-7,600	4	...	...	2,680	1,640,273	44.0	
	Robertkiri, 1964	11,434-13,190	2	...	...	1,997	1,102,146	36.8	
	MOBIL	• Adua, 1967	6,970	6	...	3	13,108	23,009,415	31.6
	• Asabo, 1966	5,600	9	1	2	20,539	118,760,213	34.0	
	• Ekpe, 1965	8,200	7	1	6	19,425	152,067,270	31.6	
	• Eku, 1966	5,420	2	...	4	3,810	9,375,069	28.5	
	• Ekpe WW, 1977	6,810	9	...	3	12,620	12,929,329	31.6	
	• Enang, 1968	5,600	21	...	2	28,989	71,485,726	35.0	
	• Etim, 1968	6,200	9	...	...	17,185	73,680,277	36.5	

WORLDWIDE PRODUCTION	Name of field, discovery date	Depth, feet	Flow	No. of wells Artificial lift	Shut-in	B'd average, first 6 mo. 1981	Cumulative, bbl. to July 1, 1981	*API gravity
	• Idoho, 1966	9,020	3	...	2	2,066	25,104,822	28.5
	• Inim, 1966	5,850	8	...	2	19,705	98,953,061	37.3
	• Mfem, 1967	5,200	3	...	...	4,939	14,720,716	35.8
	• Ubit, 1968	5,400	34	...	10	28,802	116,910,293	35.8
	• Unam, 1968	5,180	9	...	...	12,048	24,869,285	35.8
	• Utue, 1966	5,700	7	...	...	9,005	49,378,429	37.9
	Abura, 1974	12,120	6	...	...	8,320	5,775,311	45.0
PAN OCEAN	Ogharefe, 1973	9,900	10	2	12	7,827	15,900,370	47.4
SHELL (MIDWEST)	Ugh-Ogini, 1964	5,860	6	...	1	2,880	16,109,584	19.0
	Ugh-Uzere-East, 1960	8,500	12	...	1	7,077	74,098,820	23.0
	Ugh-Uzere-West, 1964	8,500	11	...	...	6,214	87,290,762	23.0
	Ugh-Olomoro, 1963	7,000-10,000	25	...	6	21,449	235,109,224	22.0
	Ugh-Oweh, 1964	12,300	10	...	1	6,987	85,021,409	28.0
	Ugh-Kokori, 1960	8,000-9,800	26	...	1	31,270	270,998,688	42.0
	Ugh-Afiesere, 1966	8,000-9,000	32	...	1	16,740	88,428,338	22.0
	Ugh-Eriemu, 1961	12,500	16	...	...	9,692	31,237,858	26.0
	Ugh-Ughelli-East, 1959	11,800	5	...	...	5,946	79,088,160	35.0
	Ugh-Ughelli-West, 1963	7,400-10,200	6	...	...	5,880	25,852,996	21.0
	Ugh-Utorogu, 1964	9,000	18	...	2	10,578	113,938,977	25.0
	Ugh-Oroni, 1964	12,000	4	...	3	3,081	22,435,700	22.0
	Ugh-Warri-River, 1961	12,264	3	...	...	2,347	12,244,880	31.0
	Ugh-Ewureni, 1968	10,900	5	...	4	2,483	31,443,041	28.0
	Ugh-Rapele, 1965	12,934	2	...	1	1,374	20,175,883	42.0
	Ugh-Isoko, 1960	...	2	...	...	1,705	3,851,534	19.0
	Ugh-Osioko, 1967	12,885	...	...	...	891	6,680,044	27.0
	Forc-Odidi, 1967	10,980	18	...	8	17,888	155,937,599	37.0
	Forc-Opukushi N., 1977	...	1	...	...	1,653	509,262	30.0
	Forc-Opukushi, 1963	7,823	12	...	2	24,678	55,590,683	29.0
	Forc-Jones Creek, 1967	7,000-9,000	17	...	12	17,030	329,835,712	29.0
	Forc-Opuama, 1973	...	5	...	...	6,620	16,759,895	41.0
	Forc-Egwa, 1967	9,350	19	...	2	18,058	105,840,694	37.0
	Forc-Forcados/Yokri, 1968	10,859	61	...	32	77,863	391,232,058	22.0
	Forc-Batan, 1968	11,000	8	...	1	6,951	44,196,544	27.0
	Forc-Escravos Beach, 1969	9,931	6	...	3	5,531	41,372,900	36.0
	Forc-Otumara, 1969	8,176	20	...	...	19,363	98,436,982	25.0
	Forc-Saghara, 1970	8,590	6	...	...	5,860	19,800,223	31.0
	Forc-Ajuju, 1970	13,324	1	...	1	873	8,005,529	27.0
	Forc-Benisede, 1973	...	15	...	...	22,177	41,420,474	23.0
	Node-Sapele, 1970	12,788	11	...	4	13,285	75,814,036	42.0
	Node-Amukpe, 1970	12,378	2	...	...	1,150	9,850,455	43.0
	Node-Ober, 1972	12,006	20	...	...	23,441	56,995,018	40.0
	Other	...	...	...	...	...	261,570	...
SHELL (EAST)	Phi-Bomu, 1958	5,500-7,500	33	...	6	30,254	320,691,682	36.0
	Phi-Imo River, 1959	5,800-10,000	36	...	6	40,867	365,481,696	32.0
	Phi-Nkali, 1963	12,000	5	...	5	2,867	24,419,455	42.0
	Phi-Elelenwa, 1959	11,000	6	...	3	3,894	23,730,590	39.0
	Phi-Otmini, 1973	...	3	...	1	1,907	10,547,530	36.0
	Phi-Umuechem, 1969	5,800-10,700	15	...	3	7,379	132,974,605	36.0
	Phi-Akpor, 1965	...	3	...	...	730	1,327,666	36.0
	Phi-Tai, 1965	...	2	...	...	760	3,715,959	36.0
	Phi-Apara, 1960	9,000	5	...	2	3,506	16,284,352	36.0
	Phi-Bodo-West, 1959	9,700	7	...	3	2,746	67,409,299	29.0
	Phi-Afam, 1956	6,000	10	...	2	3,938	43,687,288	45.0
	Phi-Korokoro, 1959	3,000-9,600	7	...	1	2,944	76,915,312	36.0
	Phi-Yorla, 1970	11,917	10	...	3	5,290	47,780,788	44.0
	Phi-Bonny, 1959	12,254	13	...	2	17,225	69,129,390	36.0
	Phi-Alakiri, 1959	10,000	6	...	9	2,775	56,731,233	40.0
	Phi-Buguma Creek, 1960	12,195	4	...	2	765	12,272,088	42.0
	Phi-Cawthorne Channel, 1963	11,000	23	...	5	46,678	187,182,815	38.0
	Phi-Krakama, 1958	11,530	8	...	2	1,682	15,457,319	24.0
	Phi-Ekulama, 1958	10,483	27	...	2	42,756	127,730,543	32.0
	Phi-Soku, 1958	11,500	22	...	1	10,625	86,319,877	31.0
	Phi-Orubiri, 1971	...	3	...	3	3,155	10,420,197	38.0
	Phi-Akaso, 1979	...	...	...	...	1,977	365,196	30.0
	Egb-Oguta, 1965	10,300	13	...	8	20,619	101,694,317	46.0
	Egb-Assa, 1961	11,300	2	...	...	1,343	4,122,013	21.0
	Egb-Egbema, 1960	10,470	5	...	1	5,262	43,676,332	32.0
	Egb-Egbema West, 1965	...	14	...	3	26,760	68,544,182	45.0
	Egb-Ahia, 1965	11,500	11	...	1	4,402	74,053,866	37.0
	Eade-Utapate South, 1974	...	6	...	3	12,098	19,602,924	44.0
	Eade-Opobo South, 1974	...	6	...	...	9,221	4,737,589	44.0
	Cesw-Nun River, 1960	...	5	...	1	4,663	22,783,316	39.0
	Cesw-Enwhe, 1965	...	2	...	...	484	2,476,540	24.0
	Cesw-Etelebou, 1971	12,000	9	...	...	16,369	83,806,654	33.0
	Cesw-Kolo Creek, 1960	12,000	16	...	9	17,503	76,223,986	42.0
	Cesw-Diebu Creek, 1966	...	11	...	1	10,458	80,164,666	43.0
	Phi-Isimiri, 1964	5,900-11,000	6	...	...	4,342	31,471,750	28.8
	Phi-Ebubu, 1958	8,200	5	...	3	575	17,996,355	29.0
	Phi-Onne, 1965	10,384	3	...	...	1,469	7,019,300	29.0
	Phi-Obigbo-North, 1963	6,500-10,000	31	...	1	25,118	135,817,129	22.0
	Phi-Ajokpori, 1967	...	1	...	1	601	3,210,782	29.0
	Phi-Agbada, 1960	8,000-12,000	29	...	6	18,845	126,987,240	32.1
	Phi-Akuba, 1967	...	1	...	...	562	3,091,329	29.0
	Phi-Obele, 1963	10,000	4	...	1	881	4,231,322	26.0

WORLDWIDE PRODUCTION	Name of field, discovery date	Depth, feet	Flow	No. of wells Artificial lift	Shut-in	B/d average, first 6 mo. 1981	Cumulative, bbl. to July 1, 1981	*API gravity	
TEXACO-CHEVRON	Cesw-Adibawa, 1967	11,950	18	2	8,948	37,789,235	26.0		
	Cesw-Adibawa NE, 1973	---	3	---	3,144	7,696,688	26.0		
	Cesw-Ubie, 1961	14,380	4	---	4,824	19,174,796	28.0		
	Phi-Obeakpu, 1975	---	3	---	2,449	9,467,249	45.0		
	Cosw-Nembe Creek, 1973	---	30	2	49,673	74,610,558	35.0		
	Other	---	4	2	442	25,037,895	---		
	● Pennington, 1965	5,000- 7,000	3	---	7	1,997	20,069,567	37.5	
	● Middleton, 1972	5,000- 7,000	3	---	3	2,707	10,196,303	37.5	
	● North Apoi, 1973	4,000- 7,000	16	---	1	36,393	75,161,516	36.5	
	● Funiwa, 1978	5,000- 7,000	1	---	1	1,701	439,808	37.5	
Total Nigeria			1,468	23	382	1,687,070	8,707,793,469	---	
NORWAY	PHILLIPS	● Ekofisk, 1969	10,000	34	---	10	197,819	602,037,592	41.1
	● West Ekofisk, 1970	10,300	7	---	3	15,824	57,168,804	43.9	
	● Cod, 1968	9,500	6	---	---	7,602	7,940,528	55.0	
	● Tor, 1970	10,000	10	---	2	41,941	68,488,870	38.0	
	● Albuskjell, 1972	10,400	16	---	1	31,107	19,948,312	45.0	
	● Edda, 1972	10,480-10,600	6	---	---	16,042	11,584,239	41.5	
	● Eldfisk, 1970	9,350-10,000	22	---	---	91,778	66,139,145	37.6	
	MOBIL	● Statfjord, 1974	7,700	8	---	---	*123,432	*45,536,781	39.0
	● Murchison, 1975	9,900	8	---	---	*10,969	*12,587,162	38.0	
	Total Norway			117	---	17	536,314	881,431,433	---

*Norway's 84.09% share of production from unitized field only. †Norway's 16.25% share of production from unitized field only.

OMAN	PDO	Al Huwaisa, 1969	5,500	28	---	24,960	116,856,460	36.9
		Fahud, 1963	2,000-6,080	97	---	60,400	593,162,600	33.3
		Ghaba North, 1972	2,500-6,100	12	---	8,620	29,200,170	37.9
		Habur, 1975	2,500-5,800	1	---	950	3,212,610	15.0
		Lekhwair, 1974	7,500	14	---	7,790	28,574,121	35.1
		Natih, 1963	7,500	19	---	27,800	275,527,290	30.9
		Qarn Alam, 1972	1,370-6,500	4	---	1,750	15,154,010	15.0
		Saih Nihayda, 1972	8,700	16	---	32,230	86,297,950	39.3
		Saih Rawl, 1973	5,000-10,300	11	---	17,060	60,163,110	41.4
		Yibal-Shuaiba, 1963	8,465	74	---	87,250	322,991,190	38.9
		Marmul, 1957	3,400-11,200	50	---	32,330	6,690,540	21.0
		Gaharr	7,500	11	---	10,050	2,593,600	28.0
		Mahjour	11,700	1	---	1,160	107,530	---
		Birba	10,500	---	---	---	---	31.0
		Rima	4,200-7,500	---	---	---	---	34.0
		Amal	5,000-8,700	---	---	---	---	---
		Rahab	7,400	---	---	---	---	---
		Qata	6,200	---	---	---	---	---
		Amal SE	8,500	---	---	---	---	---
		Irad	4,200	---	---	---	---	---
		Amin South	4,500	---	---	---	---	---
		Runib	3,800-10,500	---	---	---	---	---
		Jal mud	5,900-7,000	---	---	---	---	---
	ELF GROUP	Sahmah, 1978	12,400	25	---	11,867	2,546,730	44.5
Total Oman			363	---	---	324,217	1,543,077,911	---

PAKISTAN(e)		Balkassar, 1946	8,200	---	---	---	---	---
		Dhulian, 1937	8,500	---	---	---	---	---
		Joya Mair, 1944	6,890	13	40	10,000	91,767,000	16.0-43
		Meyal, 1968	12,514	---	---	---	---	---
		Toot, 1968	14,600	---	---	---	---	---
Total Pakistan			13	40	---	10,000	91,767,000	---

PERU	BELCO	• Humboldt, 1960	3,000-8,500	25	240	81	20,608	103,471,000	38.0
		• Litoral, 1955	1,500-6,000	5	87	24	5,260	27,717,000	36.0-40.0
		• Providencia, 1967	3,000-7,720	5	38	19	1,309	17,688,000	38.0-40.0
		• Other	6,300-9,900	0	1	1	22	34,000	---
	OCCIDENTAL	Bartra, 1979	6,500-6,700	---	7	2	2,665	1,744,195	10.4
		Capahuari, 1972	11,900-12,900	---	---	4	---	340,005	25.0
		Capahuari Sur, 1973	11,800-12,700	2	10	7	55,440	72,536,459	36.4
		Carmen, 1975	9,800-10,600	---	---	1	---	45,058	34.2
		Donssa, 1978	9,800-10,600	7	---	3	10,944	6,705,805	32.2
		Forestal, 1973	9,000-9,900	1	4	4	11,380	13,519,556	26.7
		Huayuri N., 1980	10,000-10,800	---	1	---	115	37,845	18.4
		Huayuri Sur, 1977	10,000-10,800	---	4	8	4,211	6,188,871	36.7
		San Jacinto, 1978	7,200-7,950	4	---	10	5,144	1,974,693	32.2
		Shiviyacu, 1973	9,100-10,100	---	11	4	13,222	25,010,907	21.5
		Shiviyacu N.E., 1977	9,100-9,300	---	1	---	249	403,157	15.1
		Tambo, 1973	11,900-12,000	---	---	1	---	31,761	30.0
	PETROPERU	Agua Caliente, 1939	1,000-1,500	---	18	12	209	13,918,000	42.0
		Capirona, 1972	9,800-12,000	3	---	2	396	749,000	26.4
		Corrientes, 1971	10,000-12,600	13	6	2	12,639	30,208,000	25.4
		Maguia, 1957	2,100-2,400	4	11	5	761	9,256,000	37.5
		Pavayacu, 1972	9,600-11,300	---	9	5	5,167	5,619,000	24.3
		Talara-Lima area, 1869-1905	2,000-9,000	100	1,327	3,867	22,140	705,214,000	31.8-34.7

WORLDWIDE PRODUCTION	Name of field, discovery date	Depth, feet	Flow	No. of wells Artificial lift	Shut-in	B'd average, first 6 mo. 1981	Cumulative, bbl, to July 1, 1981	*API gravity
	Yanayacu, 1974	11,400-13,600	3	7	397	406,000	18.8	
	Valencia 1975	10,500-11,800	2	654	118,000	44.0		
	Total Peru		174	1,775	4,069	172,932	1,042,936.312	
PHILIPPINES	AMOCO • Cadiao, 1977*	5,800	2	1	3,396	12,875,000	48.0	
	CITIES SERVICE • South Nido, 1977	6,660-6,945	4	1	3,396	12,875,000	27.0	
	Total Philippines		6	1	3,396	12,875,000		
*Commissioned in August 1981 at initial rate of 9,000 b/d.								
QATAR	• Bul Hanine, 1970	6,000	12	86,429	471,221.152	35.0		
	Dukhan, 1940	6,500	84	33	217,578	1,961,062.235	41.1	
	• Idd El Shargi, 1960	4,500- 8,250	16	8	11,617	176,550,985	35.0	
	• Maydan-Mahzam, 1963	7,000	16	5	93,455	617,683,473	38.0	
	Total Qatar		128	46	409,079	3,226,517,845		
SAUDI ARABIA	ARAMCO • Abqaiq, 1940	6,690	52	39	652,000	6,544,000,000	37.0	
	Abu Hadriya, 1940	9,340	5	5	72,000	504,000,000	35.0	
	• Abu Safah, 1963	6,600	17	1	127,000	528,000,000	30.0	
	• Berri, 1964	8,300	37	49	504,000	2,117,000,000	32.0-34.0	
	Dammam, 1938	4,800	7	10	15,000	583,000,000	35.0	
	Fadhili, 1949	8,050	4	2	32,000	247,000,000	39.0	
	Ghawar, 1948	6,920	322	340	5,694,000	23,068,000,000	34.0	
	Harmaliyah, 1971	8,430	2	10	96,000	159,000,000	35.0	
	Khurais, 1957	5,200	33	16	68,000	140,000,000	33.0	
	Khursaniyah, 1956	6,560	23	1	177,000	796,000,000	31.0	
	• Manifa, 1957	7,950	6	50,000	184,000,000	29.0		
	• Marjan, 1967	6,800	10	5	73,000	117,000,000	33.0	
	• Qatif, 1945	7,100	16	10	77,000	698,000,000	33.0-34.0	
	• Safaniyah, 1951	5,100	208	69	1,544,000	5,907,000,000	27.0	
	• Zuluf, 1965	5,800	40	7	658,000	827,000,000	32.0	
	Total Saudi Arabia		782	564	9,839,000	42,419,000,000		
	SHARJAH	• Mubarek, 1972	12,650-12,990	2	3	8,272	64,149,541	37.0
Total Sharjah			2	3	8,272	64,149,541		
SPAIN	• Amposta Marino North, 1970	10,000	1	5	1,735	52,206,203	37.0	
	• Ayoluengo, 1964	4,000	25	5	1,290	10,874,500	37.0	
	• Casablanca, 1975	8,500	2	12,370	8,856,000	34.0		
	• Castellon B, 1972	9,000	1	2,198	8,238,478	35.0		
	• Dorado, 1975	6,700	2	6,178	7,383,000	21.0		
	Total Spain		6	25	10	23,771	87,558,181	
SYRIA	S.P.C. • Aliane, 1974	5,600	5	9	158,366	617,835,935		
	Gbebeh	2,000	17	65	3	617,835,935		
	Jebissa, 1968	6,000	3	68	1	617,835,935		
	Karatchok, 1958	5,600	6	33	3	617,835,935		
	Rumeilan, 1962	5,500	7	329	6	617,835,935		
	Souedieh, 1959	5,500	7	329	6	617,835,935		
	Tichrine	3	6	6	6	617,835,935		
Total Syria		45	501	158,366	617,835,935			
TRINIDAD	AMOCO • Teak, 1972	15,191	18	30	42,185	139,576,357	29.3	
	• Samaan, 1972	11,780	17	21	26,905	126,453,767	36.8	
	• Poult, 1974	11,650	19	12	36,675	88,813,235	34.0	
	T.N.A. • Soldado, 1955	11,000	81	193	36,799	371,021,975	24.8	
	Fortin Offshore (FOS), 1954	6	9	303	4,063,076			
	TRINIDAD-TESORO • Palo Seco & Erin, 1926	12,718	27	419	61,762	95,857,947	20.2	
	Fyzabad, 1918	11,000	5	322	3,776	161,262,450	21.5	
	Coora Quarry, 1936	14,000	6	187	2,289	86,106,442	23.8	
	• Galeota, 1972	6,304	2	39	5,092	6,806,658	25.5	
	TEXACO • Brighton, 1908	7,500	18	145	1,240	70,945,437	20.8	
	Barrackpore, 1911	11,067	11	33	1,471	27,243,109	18.3	
	Guayaguayare, 1903	10,750	1	133	2,501	82,479,602	33.7	
	Palo Seco, 1926	10,500	18	147	4,004	87,272,760	25.0	
	Forrest Reserve, 1913	11,000	14	411	6,592	247,743,128	23.0	
	Oropouche, 1944	9,077	4	30	528	6,015,597		
	TRINTOC • Area IV & Guapo, 1913	10,626	16	54	1,213	35,716,569	25.5	
	Parrylands, 1913	10,626	25	41	1,478	36,354,615	30.2	
	Point Fortin C & W, 1907	10,626	31	89	2,207	35,280,865	22.0	
	Point Fortin E., 1929	11,000	4	49	883	24,367,806	22.2	
	Penal, 1936	11,067	23	66	1,055	59,316,965	22.4	
	Catshill, 1950	9,693	1	47	547	22,083,943	38.3	
Other			664	50	10,456	217,533,292		
Total Trinidad		347	3,141	50	249,961	2,032,315,595		

WORLDWIDE PRODUCTION	Name of field, discovery date	Depth, feet	Flow	No. of wells Artificial N/R	Shut-in	B/d average, first 6 mo. 1981	Cumulative, bbl. to July 1, 1981	*API gravity
TUNISIA								
ELF AQUITAINE	Ashtar	10,500	11	2	1	38,830	109,503,362	29.0
	Douleb, 1968	1,500	10	1	2	1,460	15,085,340	40.0
	Tamesmida	2,500	2	1	1	190	1,471,784	36.0
	Semimama	2,500	1	1	1	17	6,205	40.0
CFP	Sidi El Itayem, 1971	9,232	1	10	2	3,230	15,380,557	39.8
	Other	---	---	---	---	---	655,000	---
AGIP-TUNISIA (Sitep)	El Borma, 1964	8,250-8,900	43	10	---	71,100	325,338,000	42.0
	Chouech es Saïda, 1971	12,600	1	---	---	800	1,403,000	44.0
	Total Tunisia	---	69	23	6	115,627	468,843,248	---

TURKEY								
TURKSE SHELL	Barbes, 1971	7,200	---	9	1	2,163	10,878,447	29.7
	Beykan, 1964	5,200	---	19	3	4,525	49,820,095	33.2
	Kayakoy, 1960	6,000	---	14	3	3,042	14,434,141	38.2
	Kayakoy W., 1964	5,300	---	11	5	3,275	23,105,203	34.7
	Kurkan, 1963	4,500	15	---	3	3,253	40,662,238	31.4
	Malitepe, 1970	NA	---	8	1	1,489	4,772,587	32.7
	Sahaban-Kurkan S., 1965	5,500	---	5	5	1,341	17,022,558	34.5
	Sincan, 1979	NA	3	---	---	1,030	324,393	31.3
	Yatir/Yatir-E., 1973	5,246	---	7	2	1,005	3,514,485	30.9
	Other	---	---	7	2	814	7,734,716	---
MOBIL	Selmo, 1964	3,200	---	14	1	5,091	53,191,000	34.2
	Other	---	---	---	---	---	2,339,728	---
TPAO	Raman, 1940	4,500	---	91	---	7,305	35,737,710	17.4
	Garzan-Germik, 1951	5,800-6,500	---	24	---	1,322	32,846,101	23.6
	Raman West, 1961	4,300	---	100	---	2,346	28,522,572	11.7
	Silivanka-Beycayir	7,500-7,700	---	13	---	959	5,724,614	23.1
	Adiyaman, 1971	5,750	---	11	---	749	6,588,297	24.3
	Saricak, Saricak S., 1973	5,250	---	8	---	581	4,974,415	31.0
	Yenikoy, 1973	6,350	---	13	---	1,701	5,548,987	31.4
	Sahaban South, 1978	5,450	---	5	---	656	813,744	33.5
	G. Dincer, 1981	5,250-5,350	---	5	---	1,530	139,234	16.7
	Other	---	---	38	---	1,551	19,117,491	---
ERSAN	Kahta, 1958	3,500	---	3	---	114	4,044,513	11.5
	Total Turkey	---	18	400	26	45,286	371,857,269	---

UNITED KINGDOM								
AMOCO	Montrose, 1969	8,200	16	---	---	26,600	40,030,000	40.5
BGC	Witch Farm, 1974	2,909	---	8	2	2,900	1,170,802	37.0
	Sherwood, 1977	5,115	---	---	3	---	487,774	41.0
	Other	---	---	---	6	---	146,948	---
BNOC GROUP	Thistle, 1973	9,000	25	11	1	119,770	110,469,237	33.4
BP	Forties, 1970	8,000	50	---	---	474,865	768,163,173	37.0
	Buchan, 1974*	8,692	7	---	---	6,489	1,558,015	33.0
	East Midlands, 1939	3,500	---	78	145	1,900	24,102,988	40.0
CHEVRON	Ninian, 1974	10,000	33	---	2	291,900	195,219,600	35.0
CONOCO GROUP	Statfjord, 1974†	7,000	8	---	---	123,354	18,615,562	39.0
	Murchison, 1975§	9,900	8	---	1	556,531	513,337,838	38.0
HAMILTON BROS.	Argyll, 1971	9,000-9,400	6	---	---	11,783	37,634,281	38.0
MOBIL	Beryl, 1972	9,900-11,500	15	6	2	86,589	136,077,000	37.4
OCCIDENTAL	Claymore, 1974	8,100	---	21	---	56,900	101,497,015	29.5
	Piper, 1973	8,100	17	1	1	200,016	370,144,754	37.2
SHELL ESSO	Auk, 1970	---	7	---	4	13,135	49,859,396	37.0
	Brent, 1971	---	22	---	3	215,049	194,674,053	38.0
	Cormorant S., 1972	---	---	---	7	18,060	11,538,990	36.0
	Dunlin A., 1973	---	12	---	1	72,909	70,753,412	33.0
TEXACO NORTH SEA	Tartan, 1974†	10,217-12,614	1	---	1	11,324	2,049,698	37.0-39.8
UNION OIL	Heather, 1973	10,800	3	6	---	20,648	16,221,120	36.0
	Total United Kingdom	---	230	131	179	1,710,722	2,153,747,656	---

*Placed on production May 21 at rate of 38,950 b/d. †U.K.'s 15.91% share of production from unitized field only. §U.K.'s 83.75% share of production from unitized field only. ‡First production Jan. 1, 1981.

VENEZUELA								
PDV-ANZOATEGUI	Boca, 1971	9,500	6	9	35	1,772	74,029,239	33.0
	Caico Seco, 1946	6,500-7,300	24	11	58	5,102	59,317,211	37.3
	Chimire, 1948-52	7,000-7,200	10	11	43	7,145	359,496,257	36.0
	Dacion, 1957	6,700	6	92	41	10,330	201,762,387	21.3
	Elias, 1954	5,000-6,470	33	41	65	9,726	103,810,951	36.6
	El Roble, 1939	3,500-11,500	11	1	37	623	38,729,350	51.3
	Guico, 1944	4,500-7,000	2	11	54	898	86,399,343	25.4
	Guara, 1946	5,000-10,000	25	70	198	17,920	537,767,095	26.0
	Inca, 1948	7,250	11	14	21	3,388	27,957,720	32.9
	Leona, 1938	2,200-12,800	11	153	112	14,623	170,373,579	21.4
	La Ceiba, 1946	9,450	12	6	17	4,529	40,109,009	43.8
	Mata, 1954	8,970-10,516	29	22	328	9,445	485,553,927	34.1
	Merrey, 1937	5,400-5,700	4	313	79	19,328	220,365,983	11.4
	Nipa, 1945	6,000-8,500	38	111	256	17,629	477,960,703	29.5
	Oscurote-Norte, 1952	9,513	5	17	54	2,943	117,386,636	22.1
	Oficina, 1937	5,900	45	248	199	34,757	734,807,410	21.6
	Soto, 1950	9,500	21	15	165	4,351	172,702,433	38.9
	Sta. Ana, 1936	8,500	54	4	48	9,587	12,062,246	44.3

WORLDWIDE PRODUCTION	Name of field, discovery date	Depth, feet	Flow	No. of wells Artificial 1981	Shut-in	D/d average, first 6 mo. 1981	Cumulative, bbl. to July 1, 1981	*API gravity
	San Joaquin, 1939	6,550	31	...	36	2,351	41,794,141	53.2
	Sta. Rosa, 1941	8,500	121	17	56	19,351	268,171,827	48.4
	Yopales, 1937	4,600	26	114	100	15,574	127,659,249	22.2
	Zanzas, 1958	13,270	7	1	9	3,389	30,379,952	35.4
	Zapatos, 1955	11,500	21	6	43	6,743	134,780,099	37.0
	Zorro, 1953	11,100	6	7	15	2,580	65,794,539	28.3
	Zulus, 1957	12,710	6	1	16	1,275	20,396,411	39.8
	Zumo, 1954	9,200	4	16	29	3,500	72,311,554	17.9
	La Ceibita, 1963	9,878	23	...	21	4,045	73,134,901	41.3
	Adjuntas, 1957	5,000	1	31	22	2,187	8,963,031	13.9
	Other	...	72	57	288	28,904	626,342,820	...
MONAGAS	Acema, 1960	12,530-13,750	16	6	16	49,557	56,744,621	23.9
			38	8	15	12,793	112,629,612	12.6
	Aguasay, 1955	8,100-13,400	8	2	47	3,816	103,994,493	41.7
	Jobo, 1956	3,600-4,000	2	151	197	40,918	167,050,607	12.0
	Morichal, 1958	3,312	...	67	132	9,893	153,332,471	10.6
	Orocual, 1953	2,954	11	6	22	1,890	21,731,467	27.0
	Oritupano, 1950	7,657	1	29	80	20,490	157,239,361	22.8
	Piritall, 1958	450-1,100	...	61	21	2,154	23,994,825	17.0
	Quiriquire, 1928	7,000-7,200	...	234	226	7,297	749,202,648	16.3
	Sta. Barbara, 1941	5,020-6,500	9	44	260	1,968	163,848,102	29.8
	Tacat, 1953	1,820-3,670	...	46	84	1,561	42,781,354	17.0
	Temblador, 1936	3,500-4,500	...	12	36	1,685	105,922,204	19.2
	Other	...	58	63	231	10,529	475,438,500	...
	Barua, 1928	...	2	1	7	1,250	17,039,599	20.8
	Boscan, 1946	...	...	239	165	69,925	607,016,371	10.2
	Sachaquero, 1930	...	80	2,403	1,009	367,797	5,731,734,220	20.2
ZULIA	Cruces-Manueles, 1916	3,000-8,000	2	54	14	2,569	171,811,857	30.9
			...	...	...	4,771	38,456,073	10.3
	Cabimas, 1917	2,200	92	715	336	74,703	1,458,775,024	23.4
	Centro, 1959	9,600-11,000	54	89	40	88,612	619,306,155	35.6
	La Concepcion, 1953	3,148-8,000	8	59	104	4,794	127,156,193	35.1
	La Paz, 1925	4,268-8,000	12	53	85	16,369	821,311,767	30.5
	Lago, 1959	11,450	35	4	23	26,303	191,359,487	31.7
	Lagunillas, 1926	3,000	536	2,954	1,181	465,545	9,788,541,325	21.5
	Lama, 1937	8,320	110	68	171	132,319	2,246,508,017	32.8
	Lamar, 1958	13,000	55	64	45	85,585	951,914,395	34.5
	Mara, 1945	5,240	20	187	289	10,514	394,809,679	22.0
	Mene Grande, 1914	4,130	2	298	286	12,797	612,242,386	18.4
	Motatan, 1952	...	12	9	9	12,061	37,443,966	20.3
	Sibucana, 1948	13,450	1	1	1	493	41,985,256	32.2
	Tia Juana, 1928	3,000	132	2,044	388	135,534	152,477,708	17.9
	Urdaneta, 1970	10,000	8	7	44	5,629	50,859,960	23.3
	West-Tarra, 1942	4,250-5,500	5	11	25	1,419	250,152,677	41.3
BARINAS	Other	...	35	48	85	168,570	3,459,111,806	...
	Hato, 1965	9,550	3	11	1	3,698	37,141,509	27.3
	Maporal, 1957	10,950	...	5	1	1,270	9,771,683	28.9
	Paez, 1963	...	1	31	13	10,390	38,084,863	20.2
	Silvan, 1949	10,860	1	11	...	2,305	41,572,540	29.3
	Silvestre, 1948	8,860	1	27	16	5,892	125,364,234	25.3
FALCON	Sinco, 1953	8,500-9,100	1	43	35	11,177	234,846,944	24.0
	Other	...	2	2	1	612	4,032,605	...
	All fields	...	...	10	29	349	107,534,664	24.9
GUARICO	Budare, 1958	4,523	5	4	3	6,451	58,665,275	31.5
	Las Mercedes, 1942	4,500	3	2	4	1,206	131,797,384	28.8
	Ruiz, 1949	4,500	1	1	1	551	32,455,045	32.0
	Other	...	...	...	...	2,304	75,993,395	...
AMACURO	Tucupita	...	...	...	...	1,648	49,733,976	16.6
	Other	...	...	...	...	3	...	...
Total Venezuela			2,027	11,583	8,223	2,163,961	36,441,258,306	

WEST GERMANY

BAVARIA	Arlesried, 1964	4,900	...	1,179	11,157,731	47.0	
	Moenchsrot, 1958	4,800	98	...	489	10,716,716	36.0
	Other	...	...	...	3,909	27,741,709	...
EMSLAND	Ermlichheim, 1964	2,600	...	...	2,617	36,682,340	25.0
	Georgsdorf, 1944	1,800-2,600	...	...	7,099	86,179,919	24.0-29.0
	Meppen-Schwefingen, 1960	4,000	1,072	...	1,132	9,853,251	28.0-30.0
	Ruehlmoor, 1949	2,000-4,700	...	...	10,201	115,949,799	28.0-30.0
	Ruehlertwist, 1949	2,350-2,900	...	...	1,808	27,109,447	25.0
	Scheerhorn, 1949	3,550-3,750	...	...	3,668	43,477,012	30.0
	Other	...	...	...	1,578	27,174,372	...
SCHLESWIG-HOLSTEIN	Ploen-Ost, 1959	6,400	...	...	2,728	45,098,071	36.0
	Preetz, 1962	8,350-8,550	208	...	530	9,887,168	29.0
	Reitbrook, 1937	1,450-2,100	...	...	1,006	35,640,137	29.0
	Other	...	...	...	3,410	47,005,380	...
HANOVER	Eldingen, 1949	4,750	...	...	1,083	17,210,453	35.0
	Hankensbuettel, 1954	4,450-5,100	...	...	5,319	81,607,578	33.0
	Hardesse, 1958	4,300-5,900	...	...	1,169	7,613,069	34.0
	Hohne, 1958	4,300-5,900	...	...	1,034	36,855,644	33.0-34.0
	Knesebeck, 1958	5,100-5,200	...	...	1,375	15,085,980	36.0
	Leiferde, 1956	2,600	851	...	752	18,876,095	34.0



UNUSUAL DRILLING OPERATION was Deutsche Texaco's operation on the mudflats of the German North Sea of Friedrichskoog in Schleswig Holstein. The well was drilled by a rig mounted on dual pontoon barges.

WORLDWIDE PRODUCTION	Name of field, discovery date	Depth, feet	Flow	No. of wells Artificial lift	Shut-in	B'd average, first 6 mo. 1981	Cumulative, bbl, to July 1, 1981	*API gravity
	Lueben, 1955	3,950	...	...	...	1,008	9,644,151	35.0-38.0
	Meckelfeld, 1938	1,000-1,300	...	...	...	580	13,204,460	24.0-32.0
	Oelheim-Sued, 1968	7,650	...	...	...	840	5,660,971	33.0
	Orrel-Wesendorf-Nord, 1954	4,450	...	...	...	1,069	10,309,582	...
	Ruehme, 1954	1,950	...	...	...	854	8,000,014	...
	Sinstorf, 1960	6,750-7,150	...	...	...	962	16,762,889	...
	Suderbruch, 1949	3,750-7,550	...	...	...	866	21,218,611	19.0-38.0
	Vorhop, 1952	2,950-6,900	...	...	...	1,041	14,150,111	36.0
	Other	...	...	...	...	3,442	216,658,209	...
UPPER RHINE VALLEY	Landau, 1955	3,950-4,800	...	...	...	1,588	22,087,846	36.0
	Other	...	...	102	...	235	11,672,296	...
WESER-EMS	Barenburg, 1953	2,300-3,300	...	...	...	2,817	30,779,761	29.0
	Boikstedt, 1954	3,750	...	...	...	1,438	17,500,752	...
	Bramberge, 1958	2,560-3,300	...	...	...	8,425	80,150,247	29.0
	Dueste, 1954	2,600-4,250	...	...	...	2,281	37,133,901	...
	Gross Lessen, 1969	3,300	...	673	...	2,300	18,462,410	...
	Sued-Oldenburg, 1950	1,700-6,500	...	...	...	1,292	35,827,004	...
	Voigtei, 1953	1,150-1,500	...	...	...	1,051	22,240,521	31.0-34.0
	Wehrbleck, 1947	3,400	...	...	...	965	13,886,401	33.0
	Other	...	...	...	...	2,540	27,478,013	...
Total West Germany				3,004	...	87,780	1,343,830,021	

ZAIRE

GULF OIL	• GCO, 1970	7,000-9,000	8	...	1	1,264	4,767,766	29.0
	• Mibale, 1973	5,000-6,000	...	6	...	17,699	36,457,515	30.0
	• Mwambe, 1979	6,150	...	...	...	70	265,776	30.4
Total Zaire			8	6	1	19,033	41,491,057	

U.S.S.R.

Field, year discovered	No. wells	1981 prod. (million bbl)	Cum prod. 1-1-82 (million bbl)	Pay, ft	Field, year discovered	No. wells	1981 prod. (million bbl)	Cum prod. 1-1-82 (million bbl)	Pay, ft
Arian, 1955	3,000	62	2,120	Carb., 4,429	Pravdinsk, 1964	500	60	600	L. Cret., 9,580
Baku Archipelago, 1963	180	35	370	Pliocene, 8,773	Romashkino, 1948	8,000	400	12,000	Devonian, 5,791
Fedorovskoye, 1971	1,000	220	820	L. Cret., 5,900	Samotlor, 1965	4,000	1,125	7,815	L. Cret., 7,316
Kholmogorskoye, 1973	300	30	115	L. Cretaceous	Sovetskoye, 1962	300	50	650	Cret., 11,130
Kotur-Tepe, 1956	350	35	1,010	Pliocene, 8,793	Usa, 1963	700	106	410	Paleozoic, 6,510
Mamontovo, 1965	800	125	980	Cret'ous, 6,300	Ust-Balyk, 1961	1,000	85	1,200	L. Cret., 8,845
Megion, 1961	230	25	385	Ju., Cret., 8,235	Uzen, 1961	2,000	80	1,300	Jurassic, 2,667
Neftiame Kamni, 1949	1,200	24	999	Pliocene, 5,406	Zapadno-Surgut, 1962	250	30	420	Cret., 7,628

**Gas production
(billions cu ft)**

	1981
WESTERN HEMISPHERE	
Argentina	330.0
Bolivia	152.0
Brazil	96.0
Canada	2,623.0
Chile	141.0
Colombia	114.0
Ecuador	89.0
Guatemala .....	.....
Greece .....	.....
Mexico	1,486.0
Peru	25.0
Trinidad	192.0
United States	19,596.0
Venezuela	602.0
Total	25,446.0
EUROPE	
Austria	89.0
France	265.0
West Germany	636.0
Greece .....	.....
Italy	500.0
Netherlands	3,054.0
Norway	923.0
Spain	12.0
United Kingdom	1,427.0
Total	6,906.0
MIDDLE EAST	
Abu Dhabi	204.0
Bahrain	173.0
Dubai	24.0
Iran	52.0
Iraq	71.0
Israel	2.0
Kuwait	340.0
Oman	12.0
Qatar	205.0
Saudi Arabia	435.0
Syria	12.0
Turkey	12.0
Total	1,542.0
ASIA-PACIFIC	
Afghanistan	72.0
Australia	377.0
Burma	12.0
Malaya	47.0
Brunei	303.0
India	47.0
Indonesia	1,075.0
Japan	112.0
New Zealand	55.0
Pakistan	600.0
Taiwan	65.0
Total	2,765.0
AFRICA	
Algeria	1,149.0
Angola	8.0
Egypt	29.0
Gabon	4.0
Ivory Coast .....	.....
Libya	674.0
Morocco	8.0
Nigeria	66.0
Tunisia	9.0
Total	1,947.0
COMMUNIST	
China	459.0
Romania	1,440.0
USSR	16,390.0
Other	921.0
Total	19,210.0
WORLD TOTAL	57,816.0

Worldwide well completions for 1980—AAPG data

Country	Total wells	Oil	Gas	Dry	(1,000 ft) Footage	Total wells 1979	Total wildcats 1980	Oil	Gas	Wildcat footage (1,000 ft)
Latin America										
Argentina	968	771	34	163	—	773	110	36	5	—
Bolivia	23	13	1	9	242	21	6	1	1	66
Brazil	411	228	14	169	2,500	315	166	35	7	1,378
Chile	76	42	14	20	570	82	16	2	6	127
Colombia	123	88	5	30	782	85	34	8	3	271
Ecuador	—	—	—	—	—	29	—	—	—	—
Guatemala	—	—	—	—	50	—	—	—	—	50
Honduras	—	—	—	—	134	—	—	—	—	134
Mexico	519	NA	NA	NA	4,105	333	85	29	6	821
Peru	145	124	2	19	846	145	13	7	1	91
Trinidad/Tobago	185	142	6	37	675	184	13	4	0	109
Venezuela	834	737	7	90	5,940	730	51	35	3	800
Total 1980	3,284	—	—	—	26,697	—	494	157	32	—
Europe										
Austria	62	13	17	32	375	—	—	—	—	—
Denmark	11	8	2	1	NA	—	—	—	—	—
Eire	3	0	0	3	28	—	—	—	—	—
France	83	42	3	38	528	—	—	—	—	—
Greece	19	14	0	5	NA	—	—	—	—	—
Italy	85	13	21	51	816	—	—	—	—	—
Malta	1	0	0	4	—	—	—	—	—	—
Netherlands	—	—	—	—	—	—	—	—	—	—
Onshore	78	23	31	24	461	—	—	—	—	—
Offshore	50	6	22	22	NA	—	—	—	—	—
Norway	84	38	20	26	NA	—	—	—	—	—
Spain	26	3	5	18	258	—	—	—	—	—
Sweden	23	15	0	8	22	—	—	—	—	—
Switzerland	1	0	1	0	9	—	—	—	—	—
U.K.	—	—	—	—	—	—	—	—	—	—
Onshore	24	13	1	10	461	—	—	—	—	—
Offshore	263	145	3	115	NA	—	—	—	—	—
West Germany	—	—	—	—	—	—	—	—	—	—
Onshore	120	79	17	24	760	—	—	—	—	—
Offshore	1	0	1	0	15	—	—	—	—	—
Total 1980	934	412	144	378	—	—	—	—	—	—
North Africa										
Algeria	NA	NA	NA	NA	NA	—	—	—	—	—
Egypt	83	752	45	—	—	—	—	—	—	—
Libya	169	1,179	35	—	—	—	—	—	—	—
Morocco	10	91	10	—	—	—	—	—	—	—
Sudan	8	93	8	—	—	—	—	—	—	—
Tunisia	15	158	15	—	—	—	—	—	—	—
Total 1980	NA	NA	NA	NA	NA	—	—	—	—	—
Total 1979	350	3,000	93	—	—	—	—	—	—	—
Other Africa										
Angola	11	118	1	—	—	—	—	—	—	—
Angola-Cabinda	2	15	1	—	—	—	—	—	—	—
Cameroon	44	310	17	—	—	—	—	—	—	—
Congo	38	214	11	—	—	—	—	—	—	—
Gabon	40	292	15	—	—	—	—	—	—	—
Ghana	1	9	0	—	—	—	—	—	—	—
Ivory Coast	8	67	2	—	—	—	—	—	—	—
Mauritania	1	16	1	—	—	—	—	—	—	—
Niger	3	26	3	—	—	—	—	—	—	—
Nigeria	144	1,375	31	—	—	—	—	—	—	—
South Africa	8	116	8	—	—	—	—	—	—	—
Seychelles	1	14	1	—	—	—	—	—	—	—
Somali	1	14	1	—	—	—	—	—	—	—
Zaire	2	17	0	—	—	—	—	—	—	—
Total 1980	304	2,603	92	—	—	—	—	—	—	—
Middle East										
Saudi Arabia	222	NA	40	—	—	—	—	—	—	—
Kuwait	2	NA	2	—	—	—	—	—	—	—
Qatar	53	NA	3	—	—	—	—	—	—	—
Far East										
Brunei	56	NA	1	—	—	—	—	—	—	—
Indonesia	631	NA	182	—	—	—	—	—	—	—
Japan	24	NA	24	—	—	—	—	—	—	—
Malaysia	107	NA	44	—	—	—	—	—	—	—
Pakistan	18	NA	10	—	—	—	—	—	—	—
Philippines	25	NA	23	—	—	—	—	—	—	—
Taiwan	30	NA	30	—	—	—	—	—	—	—
Thailand	25	NA	14	—	—	—	—	—	—	—
Total 1980	916	—	328	—	—	—	—	—	—	—
Australia	126	—	67	—	—	—	—	—	—	—
New Zealand	5	33,584	5	—	—	—	—	—	—	—
Fiji	2	18,421	2	—	—	—	—	—	—	—
Papua New Guinea	1	9,900	1	—	—	—	—	—	—	—
U.S.A.	62,462	284,460	11,916	—	—	—	—	—	—	—
Canada	8,813	34,594	3,857	—	—	—	—	—	—	—

NA—Not available

Worldwide production statistics

NORTH AMERICA

Upper figures = 1,000 b/d
Lower figures = million t/y

	1940	1950	1960	1965	1970	1973	1974	1975	1976	1977	1978	1979	1980	1981
Canada	23.5 1.2	79.6 4.0	525.6 26.2	801.4 39.9	1,263.6 62.9	1,798.0 89.5	1,689.0 84.1	1,426.0 71.0	1,335.0 66.5	1,321.0 65.8	1,324.0 65.9	1,496.0 74.5	1,412.0 70.3	1,297.0 63.9
United States	3,707.4 184.6	5,407.1 269.3	7,054.6 351.3	7,804.1 388.6	9,630.0 479.6	9,189.0 457.6	8,774.0 436.9	8,374.0 417.0	8,132.0 405.0	8,245.0 410.6	8,701.0 433.3	8,544.0 425.4	8,569.0 426.7	8,588.0 426.3
Total	3,730.9 185.8	5,486.7 273.3	7,580.2 377.5	8,605.5 428.5	10,893.6 542.5	10,987.0 547.1	10,463.0 521.0	9,800.0 488.0	9,467.0 471.5	9,566.0 476.4	10,025.0 499.2	10,040.0 499.9	9,981.0 497.0	9,875.0 490.2

AFRICA

Upper figures = 1,000 b/d
Lower figures = million t/y

	1940	1950	1960	1965	1970	1973	1974	1975	1976	1977	1978	1979	1980	1981
Algeria	...	...	182.7 9.1	551.6 27.5	1,029.1 51.2	1,097.3 54.6	1,008.6 50.2	982.6 48.9	1,075.1 53.5	1,152.3 57.4	1,161.2 57.8	1,175.0 58.5	1,016.0 50.6	750.0 37.2
Angola (inc. Cabinda) ..	...	...	1.3 0.1	13.0 0.6	13.7 0.7	154.0 7.7	169.0 8.4	166.0 8.3	108.0 5.4	195.0 9.7	130.0 6.5	147.0 7.3	150.0 7.5	140.0 6.9
Cameroon	...	...	...	...	...	...	...	...	...	...	10.0 0.5	34.0 1.7	58.0 2.9	87.0 4.3
Congo	...	...	...	...	...	42.0 2.1	32.0 1.6	38.0 1.9	39.0 1.9	35.0 1.7	28.0 1.4	57.0 2.8	56.0 2.8	79.0 3.9
Egypt	18.1 0.9	44.9 2.2	61.6 3.1	122.7 6.1	327.3 16.3	165.0 8.2	144.0 7.2	230.0 11.5	328.0 16.3	413.0 20.5	464.0 23.1	526.0 26.2	596.0 29.7	578.0 28.7
Gabon	...	...	16.1 0.8	25.2 1.3	108.8 5.4	150.2 7.5	201.5 10.0	223.0 11.1	222.8 11.1	222.0 11.1	208.7 10.4	204.0 10.2	180.0 9.0	147.0 7.3
Libya	...	...	...	1,220.0 60.8	3,318.0 165.2	2,174.9 108.3	1,521.3 75.8	1,479.8 73.7	1,932.6 96.2	2,063.4 102.8	1,982.5 98.7	2,066.0 102.9	1,785.0 88.9	1,063.0 52.8
Nigeria	...	...	17.3 0.9	272.2 13.6	1,083.3 53.9	2,054.3 102.3	2,255.0 112.3	1,783.2 88.8	2,066.8 102.9	2,085.1 103.8	1,897.0 94.5	2,303.0 114.7	2,057.0 102.4	1,369.0 68.0
Tunisia	...	...	3.0 0.1	3.6 0.2	87.7 4.4	83.0 4.1	88.0 4.4	95.0 4.7	73.0 3.6	87.0 4.3	100.0 5.0	100.0 5.0	110.0 5.5	118.0 5.8
Zaire	...	...	...	...	...	...	...	...	20.0 1.0	24.0 1.2	20.0 1.0	21.0 1.0	20.0 1.0	20.0 1.0
Others	...	0.8	3.0 0.1	3.6 0.2	1.5 0.1	1.0	0.9	0.7	0.1	0.4	0.1	5.0 0.2	4.0 0.2	9.2 0.5
Total	18.1 0.9	45.7 2.2	205.0 14.2	2,211.9 110.3	5,969.4 297.2	5,921.7 294.8	5,420.3 269.9	4,998.3 248.9	5,865.4 291.9	6,277.2 312.6	6,001.5 298.9	6,637.0 330.5	6,032.0 300.3	4,360.2 216.4

ASIA-PACIFIC

Upper figures = 1,000 b/d
Lower figures = million t/y

	1940	1950	1960	1965	1970	1973	1974	1975	1976	1977	1978	1979	1980	1981
Afghanistan	...	...	...	...	...	...	...	...	0.2	0.2	0.2	...	...	...
Australia	...	...	...	7.2 0.4	175.6 8.7	419.0 20.9	385.0 19.2	411.0 20.5	417.0 20.8	431.0 21.5	430.0 21.4	441.0 22.0	379.0 18.9	382.0 19.0
Brunei	19.3 1.0	84.8 4.2	92.9 4.6	80.4 4.0	148.0 7.4	320.0 15.9	328.0 16.3	175.0 8.7	200.0 10.0	207.0 10.3	210.0 10.5	256.0 12.7	230.0 11.5	166.0 8.2
Burma	21.1 1.0	1.5 0.1	11.1 0.6	12.1 0.6	16.4 0.8	20.0 1.0	20.0 1.0	20.0 1.0	20.0 1.0	23.0 1.1	25.0 1.2	30.0 1.5	30.0 1.5	30.0 1.5
India	3.9 0.2	5.1 0.2	9.0 0.4	61.8 3.1	138.6 6.9	148.0 7.4	149.0 7.4	165.0 8.2	180.0 9.0	200.0 10.0	230.0 11.5	245.0 12.2	182.0 9.1	298.0 14.8
Indonesia	169.4 8.4	132.6 6.6	411.2 20.5	485.0 24.1	853.6 42.5	1,338.5 66.7	1,374.5 68.4	1,306.5 65.1	1,503.6 74.9	1,686.1 84.0	1,635.2 81.4	1,595.0 79.4	1,576.0 78.5	1,067.0 53.0
Japan	7.2 0.4	5.6 0.3	10.2 0.5	11.4 0.6	16.3 0.8	15.0 0.7	15.0 0.7	12.0 0.6	12.0 0.6	10.0 0.5	10.0 0.5	8.0 0.4	10.0 0.5	7.0 0.3
Malaysia	...	...	...	...	...	...	...	100.0 5.0	161.0 8.0	190.0 9.5	210.0 10.5	259.0 12.9	288.0 14.3	259.0 12.9
New Guinea	...	4.8 0.2	4.2 0.2	...	...	...	...	...	...	...	...	...	...	...
New Zealand	...	...	...	...	...	...	...	...	10.0 0.5	15.0 0.7	13.0 0.6	9.0 0.4	7.0 0.3	10.0 0.5
Pakistan	2.4 0.1	3.5 0.2	7.2 0.4	11.2 0.6	9.9 0.5	8.5 0.4	9.0 0.4	6.0 0.3	7.0 0.3	10.0 0.5	9.3 0.5	10.0 0.5	10.0 0.5	10.0 0.5
Philippines	...	...	...	...	...	...	...	...	...	...	...	26.0 1.3	15.0 0.7	2.0 0.1
Taiwan	...	...	0.4	0.4	1.8 0.1	2.0 0.1	3.0 0.1	5.0 0.2	4.2 0.2	5.0 0.2	4.3 0.2	5.0 0.2	5.0 0.2	3.0 0.1
Thailand	...	...	...	...	0.4	0.3	0.2	0.2	0.3	0.2	0.2	...	...	...
Total	223.3 11.1	237.9 11.8	546.2 27.2	669.5 33.4	1,360.6 67.7	2,271.3 113.1	2,283.7 113.5	2,200.7 109.6	2,515.3 125.3	2,777.5 138.3	2,777.2 138.3	2,883.0 143.5	2,732.0 136.0	2,234.0 110.9

EUROPE

Upper figures = 1,000 b/d
Lower figures = million t/y

	1940	1950	1960	1965	1970	1973	1974	1975	1976	1977	1978	1979	1980	1981
Austria	7.7 0.4	27.9 1.4	45.4 2.3	53.1 2.6	53.3 2.7	49.0 2.4	46.0 2.3	40.0 2.0	37.0 1.8	36.0 1.8	35.0 1.7	35.0 1.7	29.0 1.4	25.0 1.2
Denmark	...	...	...	...	...	4.0 0.2	3.0 0.1	3.0 0.1	3.0 0.1	9.0 0.4	10.0 0.5	8.0 0.4	6.0 0.3	16.0 0.8
France	1.4 0.1	2.5 0.1	38.6 1.9	59.5 3.0	45.8 2.3	26.0 1.3	23.0 1.1	20.0 1.0	20.0 1.0	20.0 1.0	21.0 1.0	20.0 1.0	26.0 1.3	34.0 1.7
Germany, Fed. Rep.	20.1 1.0	22.2 1.1	107.3 5.3	155.0 7.7	147.2 7.3	129.0 6.4	121.0 6.0	112.0 5.6	110.0 5.5	108.0 5.4	102.0 5.1	94.0 4.7	90.0 4.5	86.0 4.3
Greece	...	...	...	...	...	...	...	...	...	...	...	...	...	8.0 0.4
Italy	0.2	-0.2	37.5 1.9	47.0 2.3	26.3 1.3	15.0 0.7	19.0 0.9	19.0 0.9	20.0 1.0	18.0 0.9	28.0 1.4	30.0 1.5	39.0 1.9	37.0 1.8
Netherlands	...	13.4 0.7	36.0 1.8	37.0 1.9	35.8 1.8	29.0 1.4	30.0 1.5	30.0 1.5	31.0 1.5	30.0 1.5	36.0 1.8	25.0 1.2	25.0 1.2	27.0 1.3
Norway	...	...	...	...	...	32.0 1.6	35.0 1.7	189.0 9.4	279.0 13.9	270.0 13.4	350.0 17.4	403.0 20.1	528.0 26.3	508.0 25.2
Spain	...	...	...	...	3.6 0.2	16.0 0.8	37.0 1.8	36.0 1.8	40.0 2.0	21.0 1.0	20.0 1.0	15.0 0.7	30.0 1.5	24.0 1.2
United Kingdom	0.3	0.9	1.7 0.1	1.7 0.1	1.7 0.1	2.0 0.1	2.0 0.1	12.0 0.6	245.0 12.2	744.0 37.0	1,082.0 53.9	1,568.0 78.1	1,619.0 80.6	1,790.0 88.9
Total	29.7 1.5	67.1 3.3	266.5 13.2	353.3 17.5	313.7 15.6	302.0 15.0	316.0 15.7	461.0 22.9	785.0 38.9	1,256.0 62.3	1,664.0 82.6	2,198.0 109.1	2,392.0 118.7	2,555.0 126.9

MIDDLE EAST

Upper figures = 1,000 b/d
Lower figures = million t/y

	1940	1950	1960	1965	1970	1973	1974	1975	1976	1977	1978	1979	1980	1981
Abu Dhabi	...	...	...	281.9 14.0	693.8 34.6	1,298.0 64.6	1,421.0 70.8	1,403.0 69.9	1,590.0 79.2	1,680.0 83.7	1,450.0 72.2	1,464.0 72.9	1,350.0 67.2	1,145.0 56.8
Bahrain	19.3 0.9	30.2 1.5	45.1 2.2	57.0 2.8	76.6 3.8	68.0 3.4	67.0 3.3	61.0 3.0	58.0 2.9	54.0 2.7	56.0 2.8	51.0 2.5	48.0 2.4	44.0 2.2
Dubai	...	...	...	...	...	220.0 11.0	239.0 11.9	254.0 12.6	315.0 15.7	320.0 15.9	360.0 17.9	354.0 17.6	349.0 17.4	358.0 17.8
Iran	181.2 9.0	664.3 33.1	1,067.6 53.2	1,885.5 93.9	3,328.8 165.8	5,860.9 291.9	6,021.6 299.9	5,350.1 266.4	5,882.9 293.0	5,662.8 282.0	5,241.7 261.0	3,101.0 154.4	1,467.0 73.0	1,375.0 68.2
Iraq	60.7 3.0	136.2 6.8	1,004.2 50.0	1,315.2 65.5	1,548.6 77.1	2,018.1 100.5	1,970.6 98.1	2,261.7 112.6	2,415.4 120.3	2,348.2 116.9	2,562.0 127.6	3,434.0 171.0	2,638.0 131.3	892.0 44.3
Israel	...	...	2.5 0.1	4.0 0.2	70.2 3.5	88.0 4.4	100.0 5.0	75.0 3.7	0.7 ...	0.7 ...	10.0 0.5	31.0 1.5	1.0 ...	0.3 ...
Kuwait	...	344.4 17.1	1,628.2 81.1	2,169.5 108.0	2,734.5 136.2	2,761.0 137.5	2,276.0 113.3	1,837.0 91.5	1,913.0 95.3	1,783.0 88.8	1,865.0 92.9	2,213.0 110.2	1,382.0 68.8	916.0 45.5
Neutral Zone	...	...	136.2 6.8	360.9 18.0	500.6 24.9	525.6 26.2	541.0 26.9	496.0 24.7	471.0 23.5	355.0 17.7	466.0 23.2	567.0 28.2	540.0 26.9	370.0 18.4
Oman	...	...	...	...	332.4 16.6	293.0 14.6	291.0 14.5	341.0 17.0	366.0 18.2	350.0 17.4	320.0 15.9	295.0 14.7	283.0 14.1	317.0 15.7
Qatar	...	33.6 1.7	175.1 8.7	231.1 11.5	362.4 18.0	570.3 28.4	518.4 25.8	437.6 21.8	497.6 24.8	444.6 22.1	486.7 24.2	504.0 25.1	472.0 23.5	414.0 20.6
Saudi Arabia	13.9 0.7	546.7 27.2	1,247.1 62.1	2,024.9 100.8	3,548.9 176.7	7,334.0 365.2	8,210.0 408.9	6,827.0 340.0	8,344.0 415.5	9,014.0 448.9	8,059.0 401.3	9,251.0 460.6	9,630.0 479.5	9,642.0 478.6
Sharjah	...	...	...	...	...	...	...	38.0 1.9	37.0 1.8	30.0 1.5	24.0 1.2	13.0 0.6	10.0 0.5	9.0 0.5
Syria	...	...	...	...	83.1 4.1	99.0 4.9	132.0 6.6	175.0 8.7	175.0 8.7	200.0 10.0	170.0 8.5	163.0 8.1	165.0 8.2	166.0 8.2
Turkey	...	0.3	7.0 0.3	29.7 1.5	67.9 3.4	66.0 3.3	65.0 3.2	60.0 3.0	69.0 3.4	65.0 3.2	50.0 2.5	56.0 2.8	44.0 2.2	46.0 2.3
Total	275.1 13.6	1,755.7 87.4	5,313.0 264.5	8,359.7 416.2	13,347.8 664.7	21,201.9 1,055.9	21,852.6 1,088.2	19,616.4 976.8	22,134.6 1,102.3	22,307.3 1,110.8	21,120.4 1,051.7	21,496.0 1,070.3	18,379.0 915.0	15,694.3 779.1

*Totals may not add due to rounding.

LATIN AMERICA

Upper figures = 1,000 b/d
Lower figures = million t/y

	1940	1950	1960	1965	1970	1973	1974	1975	1976	1977	1978	1979	1980	1981
Argentina	56.3 2.8	64.0 3.2	171.9 8.6	269.3 13.4	382.9 19.1	418.0 20.8	414.0 20.6	396.0 19.7	398.0 19.8	431.0 21.5	453.0 22.6	467.0 23.3	487.0 24.2	497.0 24.7
Bolivia	0.8	1.7 0.1	9.8 0.5	9.2 0.5	16.3 0.8	47.0 2.3	49.0 2.4	42.0 2.1	41.0 2.0	35.0 1.7	30.0 1.5	30.0 1.5	30.0 1.5	24.0 1.2
Brazil		0.9	80.9 4.0	94.0 4.7	160.5 8.0	169.0 8.4	179.0 8.9	174.0 8.7	171.0 8.5	162.0 8.1	160.0 8.0	161.0 8.0	182.0 9.1	215.0 10.7
Chile		1.7 0.1	19.8 1.0	34.9 1.7	34.6 1.7	32.0 1.6	29.0 1.4	25.0 1.2	24.0 1.2	22.0 1.1	20.7 1.0	23.0 1.1	29.0 1.4	40.0 2.0
Colombia	69.9 3.5	93.3 4.6	152.7 7.6	210.0 10.0	214.0 10.7	199.0 9.9	173.0 8.6	160.0 8.0	147.0 7.3	140.0 7.0	130.0 6.5	124.0 6.2	125.0 6.2	125.0 6.2
Ecuador	6.4 0.3	7.2 0.4	7.7 0.4	8.0 0.4	4.1 0.2	208.8 10.4	177.0 8.8	160.9 8.0	187.8 9.3	183.4 9.1	201.8 10.0	225.0 11.2	222.0 11.1	204.0 10.1
Guatemala	...	...	...	...	...	...	...	...	...	...	...	2.0 0.1	5.0 0.2	5.0 0.2
Mexico	120.3 6.0	198.5 9.9	270.6 13.5	323.1 16.1	430.2 21.4	465.0 23.2	653.0 32.5	806.0 40.1	894.0 44.5	981.0 48.8	1,207.0 60.1	1,461.0 72.7	1,936.0 96.4	2,390.0 118.6
Peru	33.2 1.6	41.1 2.0	52.6 2.6	63.2 3.1	72.2 3.6	69.0 3.4	76.0 3.8	73.0 3.6	75.0 3.7	90.0 4.5	150.0 7.5	195.0 9.7	191.0 9.5	184.0 9.1
Trinidad & Tobago	60.9 3.0	56.5 2.8	115.7 5.8	133.9 6.7	139.8 7.0	164.0 8.2	178.0 8.9	205.0 10.2	224.0 11.2	230.0 11.5	240.0 12.0	215.0 10.7	211.0 10.5	240.0 11.9
Venezuela	507.0 25.2	1,498.0 74.6	2,846.1 141.7	3,472.9 172.9	3,708.0 184.7	3,366.0 167.6	2,976.3 148.2	2,346.2 116.8	2,294.4 114.3	2,237.9 111.4	2,165.5 107.8	2,356.0 117.3	2,167.0 107.9	2,093.0 103.9
Total	854.8 42.4	1,962.9 97.7	3,727.8 185.7	4,609.5 229.5	5,162.6 257.2	5,137.8 255.8	4,904.3 244.1	4,388.1 218.4	4,456.4 221.8	4,512.3 224.7	4,758.0 237.0	5,259.0 261.8	5,586.0 278.1	6,017.0 298.7
Total non-Communist	5,131.9 255.3	9,556.0 474.4	17,718.7 879.6	24,809.4 1,231.5	37,047.7 1,839.0	45,821.7 2,274.6	45,167.9 2,242.1	41,539.8 2,062.0	45,223.9 2,244.9	46,696.6 2,318.0	46,366.8 2,301.6	48,515.0 2,408.3	42,417.3 2,105.6	40,735.5 2,022.1

COMMUNIST AREAS

Upper figures = 1,000 b/d
Lower figures = million t/y

	1940	1950	1960	1965	1970	1973	1974	1975	1976	1977	1978	1979	1980	1981
Bulgaria	...	...	4.0 0.2	4.6 0.2	6.7 0.3	3.8 0.2	2.9 0.1	2.4 0.1	2.4 0.1	2.6 0.1	5.1 0.3	5.3 0.3	6.0 0.3	6.0 0.3
China	...	4.0 0.2	100.0 5.0	220.0 11.0	500.0 24.9	1,138.0 56.7	1,364.0 67.9	1,542.0 76.8	1,736.0 86.5	1,874.0 93.3	2,090.4 104.1	2,130.5 106.1	2,119.0 105.9	2,005.0 100.2
Czechoslovakia	...	0.8 ...	2.7 0.1	3.9 0.2	4.1 0.2	3.4 0.2	3.0 0.1	2.8 0.1	2.6 0.1	2.5 0.1	2.3 0.1	2.2 0.1	1.9 0.1	1.9 0.1
German Dem. Rep.	...	1.0 ...	1.0 ...	1.0 ...	1.2 0.1	4.0 0.2	4.0 0.2	4.0 0.2	10.0 0.5	10.0 0.5	10.0 0.5	10.0 0.5	10.0 0.5	10.0 0.5
Hungary	...	10.1 0.5	24.3 1.2	36.1 1.8	38.7 1.9	39.8 2.0	39.9 2.0	40.1 2.0	43.0 2.1	44.0 2.2	44.1 2.2	40.7 2.0	40.6 2.0	40.5 2.0
Poland	...	3.3 0.2	3.9 0.2	6.8 0.3	8.5 0.4	7.8 0.4	11.0 0.5	11.1 0.6	9.1 0.5	7.3 0.4	7.3 0.4	6.6 0.3	6.6 0.3	8.0 0.4
Romania	...	87.7 4.4	231.0 11.5	252.4 12.6	268.6 13.4	289.2 14.4	296.0 14.7	293.0 14.6	295.2 14.7	294.2 14.7	275.6 13.7	247.0 12.3	230.9 11.5	225.0 11.2
U.S.S.R.*	624.9 31.1	760.6 37.9	2,969.1 147.9	4,877.3 242.9	7,089.2 353.0	8,615.2 429.0	9,215.8 458.9	9,855.5 490.8	10,435.3 519.7	10,959.8 545.8	11,476.6 571.5	11,758.5 585.6	12,031.0 603.2	12,180.0 609.0
Yugoslavia	0.3 ...	2.1 0.1	18.8 0.9	40.7 2.0	57.8 2.9	68.0 3.4	67.0 3.3	75.0 3.7	77.5 3.9	79.0 3.9	82.0 4.1	70.0 3.5	84.5 4.2	85.2 4.3
Others	...	2.7 0.1	14.9 0.7	19.0 0.9	37.1 1.8	36.6 1.8	36.6 1.8	36.6 1.8	50.0 2.5	50.0 2.5	50.0 2.5	50.0 2.5	50.0 2.5	48.4 2.4
Total	625.2 31.1	872.3 43.3	3,369.7 167.3	5,461.8 271.1	8,011.9 397.7	10,205.8 506.6	11,040.2 548.0	11,787.5 585.1	12,661.1 628.5	13,323.4 661.4	14,043.4 697.1	14,320.8 710.9	14,580.0 730.5	14,610.0 725.2
*Includes gas liquids														
World Total	5,757.1 286.4	10,428.3 519.1	21,088.4 1,050.1	30,271.2 1,507.4	45,059.6 2,243.9	56,027.5 2,789.9	56,280.1 2,801.7	53,327.3 2,655.3	57,885.0 2,882.4	60,020.0 2,988.7	60,410.2 3,008.4	62,835.8 3,128.7	56,997.3 2,829.3	55,345.5 2,747.4

World oil consumption

Upper figures = 1,000 b/d Lower figures = million t/y							
	1978	1979	1980		1978	1979	1980
U.S.A.....	18,365 888.8	17,930 862.9	16,390 791.4	Switzerland	280 13.4	270 12.9	270 12.8
Canada.....	1,835 86.9	1,895 89.9	1,855 87.5	United Kingdom	1,930 94.0	1,935 94.1	1,675 80.6
Total North America	20,200 975.7	19,825 952.8	18,245 878.9	Yugoslavia.....	295 14.8	315 15.8	300 15.1
Latin America	4,180 201.4	4,395 211.8	4,610 222.1	Other	35 2.1	335 16.8	390 19.2
Total Western Hemisphere	24,380 1,177.1	24,220 1,164.6	22,855 1,101.0	Total Western Europe.....	14,315 700.4	14,860 726.0	14,015 682.5
Austria	240 12.0	250 12.4	245 12.1	Middle East	1,970 98.6	1,795 90.0	1,630 82.0
Belgium & Luxembourg	585 29.0	595 29.4	545 27.0	Africa	1,265 61.4	1,310 63.5	1,485 71.9
Denmark	325 16.1	325 16.1	265 13.2	South Asia	760 37.1	755 36.7	785 38.4
Finland	250 12.5	265 13.3	255 12.8	Southeast Asia.....	2,110 105.5	2,345 116.9	2,445 121.6
France	2,445 119.0	2,430 118.1	2,295 111.1	Japan	5,420 262.7	5,495 265.4	5,010 240.9
Germany, Fed. Rep.....	2,960 142.7	3,045 146.9	2,735 131.1	Australasia	795 37.6	800 38.0	775 36.5
Greece	230 11.7	240 11.9	250 12.5	U.S.S.R.	8,480 419.2	8,925 441.0	8,820 436.0
Ireland	120 6.0	130 6.2	120 5.7	Eastern Europe	2,040 98.9	2,085 101.1	2,115 102.6
Italy.....	2,015 99.8	2,045 101.2	1,985 98.1	China.....	1,705 84.7	1,835 91.1	1,770 88.0
Netherlands	780 37.5	800 38.5	815 39.2	Total Eastern Hemisphere	38,860 1,906.1	40,205 1,969.7	38,850 1,900.4
Norway	175 8.7	185 9.0	165 8.2	World excl. U.S.S.R. China & E. Europe	51,015 2,480.4	51,580 2,501.1	49,000 2,374.8
Portugal.....	150 7.4	160 7.7	170 8.5	World Total	63,240 3,083.2	64,425 3,134.3	61,705 3,001.4
Spain	965 47.0	970 47.3	1,040 50.7	Source: British Petroleum South Asia—Afghanistan, Bangladesh, Burma, India, Pakistan, Sri Lanka Southeast Asia—Brunei, Malaysia, Kampuchea, Indonesia, Hong Kong Korea, Laos, Philippines, Singapore, Thailand, Taiwan, Viet Nam Australasia—Australia, Papua New Guinea, New Zealand, SW Islands			
Sweden	535 26.7	565 28.4	495 24.6				

Worldwide refining capacity

EUROPE

Upper figures = 1,000 b/d
Lower figures = million t/y

	1940	1950	1960	1970	1973	1974	1975	1976	1977	1978	1979	1980	1981	1982
Austria	...	26 1.3	47 2.3	98 4.9	221 11.0	220 11.0	220 11.0	280 13.9	280 13.9	280 13.9	280 13.9	280 13.9	280 13.9	244 12.1
Belgium	12 0.6	16 0.8	171 8.5	699 34.8	832 41.4	817 40.7	867 43.2	946 47.1	1,095 54.5	1,067 53.1	972 48.4	1,064 53.0	1,056 52.6	1,035 51.4
Cyprus	...	...	...	...	12 0.6	15 0.7	15 0.7	15 0.7	15 0.7	15 0.7	15 0.7	16 0.8	16 0.8	14 0.7
Denmark	1 ...	1 ...	...	173 8.6	222 11.1	227 11.3	220 11.0	226 11.3	225 11.3	220 11.0	215 10.7	214 10.7	215 10.7	215 10.7
Finland	...	...	25 1.2	176 8.8	186 9.3	186 9.3	196 9.8	336 16.7	336 16.7	336 16.7	336 16.7	336 16.7	336 16.7	299 14.8
France	152 7.6	306 15.2	769 38.3	2,405 119.8	2,949 146.9	3,140 156.4	3,342 166.4	3,312 164.9	3,517 175.1	3,456 172.1	3,469 172.6	3,385 168.6	3,342 166.4	3,291 163.4
Germany, Fed. Rep.	48 2.4	81 4.0	573 28.5	2,351 117.1	2,698 134.4	2,826 140.7	2,987 148.8	3,103 154.5	3,075 153.1	3,081 153.4	3,103 154.5	2,986 148.7	3,021 150.4	2,937 145.8
Greece	...	...	30 1.5	95 4.7	125 6.2	314 15.6	411 20.5	420 20.9	407 20.3	407 20.3	411 20.5	431 21.5	428 21.3	427 21.2
Ireland	11 0.5	...	40 2.0	54 2.7	58 2.9	58 2.9	56 2.8	56 2.8	56 2.8	56 2.8	56 2.8	56 2.8	56 2.8	56 2.8
Italy	41 2.0	107 5.3	773 38.5	3,214 160.1	3,593 178.9	3,882 193.3	3,953 196.9	4,082 203.3	4,259 212.1	4,226 210.4	4,196 209.0	4,131 205.7	4,092 203.7	4,003 198.7
Netherlands	15 0.7	77 3.8	359 17.9	1,456 72.5	1,826 90.9	1,826 90.9	1,841 91.7	1,985 98.8	2,031 101.1	1,869 93.1	1,857 92.5	1,828 91.0	1,827 91.0	1,708 84.8
Norway	1 ...	1 ...	2 0.2	113 5.6	173 8.6	168 8.4	168 8.4	259 12.9	259 12.9	264 13.1	264 13.1	264 13.1	253 12.6	243 12.1
Portugal	4 0.2	8 0.4	23 1.1	82 4.1	80 4.0	110 5.5	110 5.5	190 9.5	190 9.5	415 20.7	361 18.0	378 18.8	341 17.0	365 18.1
Spain	2 0.1	6 0.3	146 7.3	728 36.2	1,026 51.1	1,163 57.9	1,165 58.0	1,323 65.9	1,277 63.6	1,271 63.3	1,425 71.0	1,456 72.5	1,464 72.9	1,517 75.3
Sweden	4 0.2	26 1.3	48 2.4	253 12.6	244 12.1	248 12.4	248 12.4	413 20.6	434 21.6	424 21.1	411 20.5	458 22.8	451 22.5	471 23.4
Switzerland	...	...	...	106 5.3	120 6.0	140 7.0	138 6.9	138 6.9	137 6.8	137 6.8	137 6.8	137 6.8	102 5.1	137 6.8
United Kingdom	133 6.6	197 9.8	962 47.9	2,420 120.5	2,465 122.8	2,762 137.5	2,783 138.6	2,889 143.9	3,014 150.1	2,911 145.0	2,527 125.8	2,527 125.8	2,629 130.9	2,482 123.2
Yugoslavia	5 0.2	8 0.4	10 0.5	228 11.3	288 14.3	288 14.3	288 14.3	280 13.9	249 12.4	293 14.6	293 14.6	296 14.7	297 14.8	297 14.8
Total Europe	429 21.1	860 42.6	3,978 198.1	14,651 729.6	17,118 852.5	18,390 915.8	19,008 946.9	20,253 1,008.5	20,857 1,038.5	20,728 1,032.1	20,328 1,012.1	20,243 1,007.9	20,206 1,006.1	19,741 979.9

AFRICA

Upper figures = 1,000 b/d
Lower figures = million t/y

	1940	1950	1960	1970	1973	1974	1975	1976	1977	1978	1979	1980	1981	1982
Algeria	...	...	...	47 2.3	61 3.0	115 5.7	115 5.7	122 6.1	122 6.1	122 6.1	122 6.1	122 6.1	122 6.1	122 6.1
Angola	...	...	2 0.1	20 1.0	16 0.8	25 1.2	36 1.8	35 1.7	32 1.6	32 1.6	32 1.6	36 1.8	31 1.5	32 1.6
Egypt	17 0.8	39 1.9	87 4.3	193 9.6	99 4.9	180 9.0	180 9.0	180 9.0	236 11.8	234 11.7	251 12.5	234 11.6	292 14.5	292 14.5
Ghana	...	...	...	29 1.4	27 1.3	25 1.2	28 1.4	28 1.4	26 1.3	26 1.3	26 1.3	26 1.3	26 1.3	27 1.3
Ivory Coast	...	...	...	19 0.9	24 1.2	44 2.2	44 2.2	40 2.0	41 2.0	39 1.9	39 2.0	50 2.5	50 2.5	50 2.5
Kenya	...	...	...	44 2.2	48 2.4	48 2.4	48 2.4	86 4.3	86 4.3	95 4.7	95 4.7	95 4.7	95 4.7	79 3.9
Libya	...	...	...	10 0.5	17 0.8	16 0.8	76 3.8	76 3.8	135 6.7	135 6.7	137 6.8	138 6.9	142 7.1	130 6.5
Morocco	...	...	2 0.1	35 1.7	59 2.9	59 2.9	59 2.9	68 3.4	68 3.4	72 3.6	72 3.6	72 3.6	72 3.6	72 3.6
Mozambique	...	...	...	20 1.0	17 0.8	17 0.8	17 0.8	11 0.5	11 0.5	11 0.5	16 0.8	16 0.8	16 0.8	16 0.8
Nigeria	...	...	...	40 2.0	60 3.0	60 3.0	60 3.0	57 2.8	60 3.0	60 3.0	159 7.9	160 8.0	160 8.0	254 12.6
Senegal	...	...	...	13 0.6	12 0.6	18 0.9	15 0.7	12 0.6	19 0.9	20 1.0	20 1.0	20 1.0	20 1.0	18 0.9
South Africa	1 ...	...	25 1.2	178 8.9	243 12.1	331 16.5	397 19.8	434 21.6	433 21.6	446 22.2	478 23.8	478 23.8	469 23.4	424 21.0
Sudan	...	...	...	20 1.0	20 1.0	22 1.1	22 1.1	24 1.2	24 1.2	24 1.2	26 1.3	26 1.3	24 1.2	24 1.2
Tanzania	...	...	...	14 0.7	17 0.8	17 0.8	16 0.8	16 0.8	12 0.6	12 0.6	17 0.8	17 0.8	12 0.6	14 0.7
Tunisia	...	...	...	23 1.1	21 1.0	21 1.0	25 1.2	23 1.1	22 1.1	22 1.1	34 1.7	34 1.7	34 1.7	34 1.7
Zimbabwe	...	...	...	20 1.0	...	...	...	...	...	...	...	...	...	...
Others	...	...	...	67 3.3	85 4.2	94 4.7	108 5.4	108 5.4	117 5.8	117 5.8	143 7.1	142 7.1	142 7.1	185 9.2
Total	18 0.8	39 1.9	116 5.7	792 39.2	826 40.8	1,092 54.2	1,246 62.0	1,320 65.7	1,444 71.9	1,467 73.0	1,667 83.0	1,666 83.0	1,707 85.1	1,773 88.0

NORTH AMERICA

Upper figures = 1,000 b/d
Lower figures = million t/y

	1940	1950	1960	1970	1973	1974	1975	1976	1977	1978	1979	1980	1981	1982
Canada	203 10.1	329 16.4	1,002 49.9	1,355 67.5	1,897 94.5	1,788 89.0	2,024 100.8	2,076 103.4	2,100 104.6	2,126 105.9	2,225 110.8	2,222 110.6	2,168 107.9	2,200 109.2
United States	4,460 222.1	6,696 333.5	10,400 517.9	12,079 601.5	13,992 696.8	13,383 666.5	14,845 739.3	15,043 749.1	15,930 793.3	16,171 805.3	17,150 854.1	17,720 882.5	18,470 919.6	18,700 928.3
Total	4,663 232.2	7,025 349.9	11,402 567.8	13,434 669.0	15,889 791.3	15,171 755.5	16,869 840.1	17,119 852.5	18,030 897.9	18,297 911.2	19,375 964.9	19,942 993.1	20,638 1,027.5	20,900 1,037.5

LATIN AMERICA

Upper figures = 1,000 b/d
Lower figures = million t/y

	1940	1950	1960	1970	1973	1974	1975	1976	1977	1978	1979	1980	1981	1982
Argentina	103 5.1	152 7.6	238 11.9	502 25.0	602 30.0	624 31.1	721 35.9	684 34.1	703 35.0	655 32.6	655 32.6	676 33.7	679 33.8	677 33.6
Barbados	...	...	...	3 0.1	3 0.1	3 0.1	3 0.1	3 0.1	3 0.1	3 0.1	3 0.1	3 0.1	3 0.1	3 0.1
Bolivia	1 ...	7 0.3	12 0.6	21 1.0	22 1.1	26 1.3	26 1.3	34 1.7	37 1.8	40 2.0	74 3.7	74 3.7	74 3.7	61 3.0
Brazil	4 0.2	12 0.6	156 7.8	575 28.6	718 35.8	792 39.4	962 47.9	986 49.1	1,118 55.7	1,161 57.8	1,209 60.2	1,205 60.0	1,402 69.8	1,407 69.8
Chile	1 ...	4 0.2	24 1.2	115 5.7	124 6.2	124 6.2	124 6.2	149 7.4	140 7.0	130 6.5	144 7.2	139 6.9	139 6.9	141 7.0
Colombia	15 0.7	24 1.2	51 2.5	140 7.0	172 8.6	166 8.3	172 8.6	172 8.6	165 8.2	165 8.2	174 8.7	193 9.6	199 9.9	199 9.9
Costa Rica	...	...	...	8 0.4	8 0.4	8 0.4	11 0.5	8 0.4	8 0.4	10 0.5	12 0.6	11 0.5	15 0.7	15 0.7
Cuba	4 0.2	7 0.3	87 4.3	93 4.5	93 4.6	122 6.1	122 6.1	122 6.1	122 6.1	122 6.1	160 8.0	160 8.0	160 8.0	160 8.0
Ecuador	2 0.1	5 0.2	7 0.3	37 1.8	36 1.8	35 1.7	44 2.2	44 2.2	41 2.0	96 4.8	93 4.6	86 4.3	87 4.3	90 4.3
El Salvador	...	...	...	14 0.7	14 0.7	14 0.7	14 0.7	16 0.8	16 0.8	17 0.8	17 0.8	16 0.8	16 0.8	16 0.8
Guatemala	...	...	...	21 1.0	26 1.3	26 1.3	26 1.3	25 1.2	14 0.7	14 0.7	14 0.7	16 0.8	16 0.8	16 0.8
Honduras	...	...	...	10 0.5	14 0.7	14 0.7	15 0.7	14 0.7	14 0.7	14 0.7	14 0.7	14 0.7	14 0.7	14 0.7
Jamaica	...	...	...	28 1.4	31 1.5	33 1.6	33 1.6	33 1.6	33 1.6	33 1.6	33 1.6	34 1.7	22 1.1	22 1.1
Mexico	98 4.9	160 8.0	357 17.8	515 25.6	625 31.1	625 31.1	760 37.8	760 37.8	935 46.6	1,384 68.9	1,244 61.9	1,394 69.4	1,394 69.4	1,470 73.0
Netherlands Antilles	495 24.6	617 30.7	680 33.9	795 39.6	880 43.8	945 47.1	900 44.8	849 42.3	810 40.3	842 41.9	842 41.9	792 39.4	782 38.9	782 38.9
Nicaragua	...	...	...	21 1.0	13 0.6	13 0.6	13 0.6	13 0.6	15 0.7	15 0.7	15 0.7	14 0.7	14 0.7	14 0.7
Panama	...	...	...	140 7.0	75 3.7	75 3.7	100 5.0	100 5.0	100 5.0	100 5.0	100 5.0	100 5.0	100 5.0	100 5.0
Paraguay	...	...	...	5 0.2	5 0.2	5 0.2	5 0.2	5 0.2	5 0.2	5 0.2	5 0.2	7 0.3	8 0.4	8 0.4
Peru	22 1.1	35 1.7	49 2.4	104 5.2	102 5.1	107 5.3	130 6.5	130 6.5	116 5.8	171 8.5	171 8.5	170 8.5	169 8.4	162 8.0
Puerto Rico	...	...	84 4.2	155 7.7	291 14.5	308 15.3	283 14.1	283 14.1	283 14.1	284 14.1	284 14.1	284 14.1	284 14.1	284 14.1
Trinidad & Tobago	49 2.4	104 5.2	182 9.1	417 20.8	441 22.0	461 23.0	461 23.0	461 23.0	461 23.0	461 23.0	461 23.0	456 22.7	456 22.7	456 22.7
Uruguay	5 0.2	16 0.8	28 1.4	40 2.0	40 2.0	43 2.1	43 2.1	46 2.3	46 2.3	43 2.1	43 2.1	40 2.0	40 2.0	45 2.2
Venezuela	55 2.7	254 12.6	886 44.1	1,324 65.9	1,499 74.6	1,532 76.3	1,532 76.3	1,451 72.3	1,446 72.0	1,446 72.0	1,446 72.0	1,446 72.0	1,349 67.2	1,323 65.7
Virgin Islands	...	...	...	220 11.0	418 20.8	590 29.4	590 29.4	728 36.2	728 36.2	728 36.2	728 36.2	728 36.2	728 36.2	640 31.8
Others	...	...	...	31 1.5	294 14.6	577 28.7	572 28.5	574 28.6	546 27.2	558 27.8	560 27.9	562 28.0	562 28.0	559 27.7
Total	854 42.2	1,397 69.4	2,841 141.5	5,334 265.3	6,546 325.8	7,268 361.7	7,661 381.4	7,690 382.9	7,905 393.5	8,497 422.8	8,501 423.0	8,620 429.1	8,712 433.6	8,664 430.0

MIDDLE EAST

Upper figures = 1,000 b/d
Lower figures = million t/y

	1940	1950	1960	1970	1973	1974	1975	1976	1977	1978	1979	1980	1981	1982
Bahrain	33 1.6	150 7.5	187 9.3	265 13.2	250 12.4	250 12.4	250 12.4	250 12.4	250 12.4	250 12.4	250 12.4	250 12.4	250 12.4	250 12.4
Iran	333 16.6	502 25.0	495 24.6	702 35.0	620 30.9	660 32.9	789 39.3	781 38.9	780 38.8	910 45.3	921 45.9	921 45.9	1,121 55.8	530 26.3
Iraq	4 0.2	9 0.4	56 2.8	83 4.1	99 4.9	99 4.9	169 8.4	169 8.4	168 8.4	168 8.4	168 8.4	168 8.4	168 8.4	169 8.4
Israel	...	83 4.1	87 4.3	115 5.7	147 7.3	212 10.6	201 10.0	181 9.0	201 10.0	201 10.0	195 9.7	195 9.7	190 9.5	190 9.5
Kuwait	...	25 1.2	220 11.0	489 24.3	647 32.2	646 32.2	646 32.2	685 34.1	684 34.1	712 35.5	712 35.5	645 32.1	645 32.1	623 30.9
Lebanon	...	6 0.3	24 1.2	37 1.8	54 2.7	54 2.7	54 2.7	54 2.7	...	53 2.6	53 2.6	53 2.6	52 2.6	52 2.6
Neutral Zone	...	...	50 2.5	80 4.0	80 4.0	(†) ...	(†) ...	(†) ...	(†) ...	(†) ...	(†) ...	(†) ...	(†) ...	(†) ...
Saudi Arabia	...	140 7.0	189 9.4	465 23.2	428 21.3	428 21.3	610 30.4	537 26.7	630 31.4	586 29.2	487 24.2	487 24.2	487 24.2	487 24.2
Syria	...	...	...	54 2.7	51 2.5	51 2.5	51 2.5	117 5.8	116 5.8	102 5.1	223 11.1	223 11.1	223 11.1	223 11.1
Turkey	...	1 ...	7 0.3	209 10.4	286 14.2	306 15.2	316 15.7	316 15.7	325 16.2	326 16.2	338 16.8	356 17.7	356 17.7	367 18.2
Yemen (P.D.R.)	...	...	120 6.0	178 8.9	160 8.0	162 8.1	169 8.4	169 8.4	169 8.4	143 7.1	143 7.1	175 8.7	175 8.7	178 8.8
Others	...	...	1 ...	9 0.4	16 0.8	15 0.7	28 1.4	29 1.4	48 2.4	55 2.7	56 2.8	45 2.2	63 3.1	233 11.6
Total	370 18.4	916 45.5	1,436 71.4	2,686 133.7	2,838 141.2	2,883 143.5	3,283 163.4	3,288 163.5	3,371 167.9	3,506 174.5	3,546 176.5	3,518 175.0	3,731 185.6	3,302 163.9

†Included in Kuwaiti figures.

ASIA-PACIFIC

Upper figures = 1,000 b/d
Lower figures = million ty

	1940	1950	1960	1970	1973	1974	1975	1976	1977	1978	1979	1980	1981	1982
Australia	4 0.2	14 0.7	237 11.8	581 28.9	633 31.5	681 33.9	722 36.0	707 35.2	706 35.2	709 35.3	708 35.3	725 36.1	743 37.0	742 36.8
Bangladesh	...	...	...	...	31 1.5	31 1.5	31 1.5	31 1.5	31 1.5	31 1.5	31 1.5	31 1.5	31 1.5	31 1.5
Brunei-Malaysia- Singapore	10 0.5	10 0.5	46 2.3	302 15.0	513 25.5	823 41.0	969 48.3	1,001 49.8	1,085 54.0	1,086 54.1	1,058 52.7	1,093 54.4	1,246 62.0	1,271 63.1
India	10 0.5	6 0.3	112 5.6	436 21.7	489 24.3	499 24.9	555 27.6	564 28.1	567 28.2	564 28.1	626 31.2	557 27.7	557 27.7	557 27.7
Indonesia	170 8.5	203 10.1	274 13.6	268 13.3	424 21.1	428 21.3	428 21.3	428 21.3	428 21.3	528 26.3	528 26.3	528 26.3	445 22.2	498 24.7
Japan	53 2.6	34 1.7	640 31.9	2,796 139.2	4,316 214.9	4,940 246.0	5,134 255.7	5,417 269.8	5,552 276.5	5,467 272.2	5,480 272.9	5,509 274.3	5,454 271.6	5,601 278.0
Korea, South	...	...	...	175 8.7	430 21.4	420 20.9	425 21.2	435 21.7	424 21.1	475 23.6	542 27.0	601 29.9	607 30.2	755 37.5
Pakistan	...	5 0.2	6 0.3	115 5.7	81 4.0	81 4.0	79 3.9	74 3.7	74 3.7	106 5.3	110 5.5	98 4.9	122 6.1	133 6.6
Philippines	...	...	22 1.1	180 9.0	276 13.7	284 14.1	274 13.6	247 12.3	251 12.5	253 12.6	253 12.6	253 12.6	246 12.2	286 14.2
Taiwan	...	...	28 1.4	129 6.4	199 9.9	210 10.5	244 12.1	335 16.7	425 21.2	425 21.2	425 21.2	425 21.2	515 25.6	515 25.6
Thailand	...	...	1 ...	62 3.1	156 7.8	166 8.3	166 8.3	166 8.3	161 8.0	160 8.0	160 8.0	186 9.3	186 9.3	176 8.7
Others	27 1.3	4 0.2	9 0.4	137 6.8	369 18.4	371 18.5	371 18.5	374 18.6	369 18.4	373 18.6	364 18.1	380 18.9	402 20.0	420 20.8
Total	274 13.6	276 13.7	1,375 68.2	5,181 257.8	7,917 394.0	8,934 444.9	9,398 468.0	9,779 487.0	10,073 501.6	10,177 506.8	10,285 512.3	10,386 517.1	10,554 525.5	10,985 545.3
Total, exclu. U.S.S.R., China, E. Europe	6,608 328.3	10,513 523.0	21,146 1,052.9	42,078 2,094.6	51,134 2,545.6	53,738 2,675.6	57,465 2,861.8	59,449 2,960.1	61,680 3,071.3	62,672 3,120.4	63,702 3,171.8	64,375 3,205.2	65,548 3,263.4	65,365 3,244.7

U.S.S.R.-EASTERN EUROPE-CHINA

Upper figures = 1,000 b/d
Lower figures = million ty

	1940	1950	1960	1970	1973	1974	1975	1976	1977	1978	1979	1980	1981	1982
China	...	8 0.4	98 4.9	300 14.9	500 24.9	600 29.9	850 42.3	1,014 50.5	1,398 69.6	1,400 69.7	1,578 78.6	1,600 79.7	1,810 90.1	1,810 90.1
Czechoslovakia	...	16 0.8	46 2.3	220 11.0	306 15.2	346 17.2	354 17.6	374 18.6	404 20.1	413 20.6	445 22.2	455 22.7	455 22.7	455 22.7
Hungary	...	20 1.0	58 2.9	130 6.5	210 10.5	210 10.5	212 10.6	223 11.1	230 11.5	226 11.3	230 11.5	290 14.4	312 15.5	312 15.5
Poland	...	4 0.2	20 1.0	156 7.8	240 12.0	276 13.7	280 13.9	326 16.2	366 18.2	370 18.4	380 18.9	385 19.2	385 19.2	385 19.2
Romania	...	182 9.1	260 12.9	356 17.7	408 20.3	442 22.0	452 22.5	462 23.0	490 24.4	508 25.3	533 26.5	608 30.3	617 30.7	617 30.7
U.S.S.R.	...	900 44.8	2,800 139.4	5,640 280.9	7,260 361.5	7,810 388.9	8,240 410.3	9,225 459.4	9,500 473.1	9,785 487.3	10,478 521.8	10,950 545.3	11,400 567.6	11,600 575.8
Others	...	4 0.2	40 2.0	332 16.5	350 17.4	350 17.4	375 18.7	726 36.1	800 39.8	810 40.3	823 41.0	852 42.4	852 42.4	852 42.4
Total	...	1,134 56.5	3,322 165.4	7,134 355.3	9,274 461.8	10,034 499.6	10,763 535.9	12,350 614.9	13,188 656.7	13,512 672.9	14,467 720.5	15,140 754.0	15,831 788.2	16,031 795.8
World total	6,608 328.3	11,647 579.5	24,470 1,218.3	49,212 2,449.9	60,408 3,007.4	63,772 3,175.2	69,226 3,397.7	71,799 3,575.0	74,868 3,728.0	76,184 3,793.3	78,169 3,892.3	79,515 3,959.2	81,379 4,039.7	81,396 4,040.5

Survey of operating refineries worldwide

(capacities of January 1, 1982)

Country	No. plants	Crude b/cd	Catalytic cracking	Catalytic reforming	Country	No. plants	Crude b/cd	Catalytic cracking	Catalytic reforming
Abu Dhabi	2	128,250	....	20,853	Liberia	1	15,000	....	2,000
Algeria	3	122,400	....	23,600	Libya	2	129,500	....	14,500
Angola	1	32,100	....	1,900	Madagascar	1	11,440	....	1,610
Antigua	1	17,500	....	3,000	Malaysia	3	175,000	....	10,000
Argentina	12	676,700	95,900	36,900	Martinique	1	11,000	....	2,500
Australia	11	741,600	164,800	174,500	Mexico	10	1,470,000	297,000	141,800
Austria	1	244,000	19,600	22,600	Morocco	2	72,000	5,600	9,200
Bahamas	1	500,000	....	....	Mozambique	1	16,000	....	....
Bahrain	1	250,000	34,200	17,100	Netherlands	8	1,707,500	111,000	211,900
Bangladesh	1	31,200	....	1,720	Netherlands Antilles	2	782,000	42,000	15,000
Barbados	1	3,000	....	....	New Zealand	1	74,000	....	24,000
Belgium	8	1,034,530	90,900	123,050	Nicaragua	1	14,400	....	2,850
Bolivia	3	60,700	....	12,900	Nigeria	4	253,500	43,700	44,475
Brazil	13	1,406,600	277,000	21,600	Norway	4	242,700	9,000	20,000
Burma	2	26,300	....	....	Okinawa	3	208,000	....	11,600
Cameroon	1	43,000	....	6,500	Pakistan	3	133,100	....	5,210
Chile	2	141,000	32,000	9,300	Panama	1	100,000	....	7,500
China Republic (Taiwan)	2	515,410	9,040	52,440	Paraguay	1	7,500	....	....
Colombia	6	198,500	77,000	6,000	Peru	5	161,595	22,246	1,760
Costa Rica	1	15,000	....	1,500	Philippines	3	286,000	23,100	40,200
Cyprus	1	14,000	....	3,000	Portugal	3	364,882	11,000	54,047
Denmark	3	215,000	....	37,900	Puerto Rico	3	284,000	52,000	76,000
Dominican Republic	2	48,000	....	9,500	Qatar	1	13,300	....	1,900
Ecuador	4	90,200	11,400	....	Saudi Arabia	3	487,332	....	45,386
Egypt	6	292,000	....	7,000	Senegal	1	18,000	....	1,900
El Salvador	1	16,300	....	2,800	Sierra Leone	1	10,000	....	....
Ethiopia	1	14,430	....	1,890	Singapore	5	1,096,000	8,600	30,000
Finland	2	299,000	37,500	48,000	Somalia	1	10,000	....	....
France	22	3,291,000	220,000	437,750	South Africa	4	423,500	82,500	62,000
Gabon	1	20,000	....	1,400	Spain	10	1,517,400	....	195,200
Germany	31	2,937,300	191,100	445,350	Sri Lanka	1	50,000	....	3,750
Ghana	1	26,600	....	6,175	Sudan	1	24,000	....	2,100
Greece	4	427,000	17,500	30,300	Sweden	6	470,800	....	83,800
Guam	1	43,700	....	....	Switzerland	2	137,300	....	25,000
Guatemala	1	16,000	....	3,000	Syria	2	223,040	....	16,975
Honduras	1	14,000	....	1,800	Tanzania	1	13,500	....	3,000
Hungary	5	311,500	....	30,100	Thailand	3	176,000	8,800	24,900
India	9	556,750	55,000	15,060	Togo	1	20,000	....	4,400
Indonesia	9	498,215	37,525	32,680	Trinidad	2	456,000	25,000	27,000
Iran	4	530,000	....	63,845	Tunisia	1	34,000	....	3,300
Iraq	7	168,500	....	5,000	Turkey	4	367,400	41,260	29,375
Ireland	1	56,000	....	14,500	United Kingdom	17	2,481,500	255,650	436,200
Israel	2	190,000	15,000	24,300	Uruguay	1	45,000	5,000	3,000
Italy	32	4,002,607	256,700	406,300	Venezuela	8	1,323,060	114,200	6,500
Ivory Coast	2	50,400	....	4,600	Virgin Islands	1	640,000	....	70,000
Jamaica	1	22,000	....	3,500	Yemen, S.	1	178,000	....	12,000
Japan	46	5,601,050	421,600	584,640	Yugoslavia	7	297,007	1,960	45,156
Jordan	1	91,330	4,410	9,514	Zaire	1	17,000	....	3,000
Kenya	1	79,000	....	8,500	Zambia	1	24,500	....	5,600
Korea	6	754,500	....	36,750					
Kuwait	5	623,000	....	19,000					
Lebanon	2	52,000	7,250	7,292					
					Total	438	46,611,928	3,235,044	4,664,503

Country-by-country refining survey

Company and refinery location	Crude	Catalytic cracking	Catalytic reforming
ABU DHABI			
Abu Dhabi National Oil Co.-Ruwais	114,000		² 18,193
Umm Al Nar	14,250		² 2,660
Total	128,250		20,853

ALBANIA

Government-owned refineries at Ballsh, Cerrik, Stalin.

Total	40,000		
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ALGERIA

Sonatrach: Arzew	60,000		8,600
Hassi Messaoud	2,400		
Maison Carree	60,000		15,000
Total	122,400		23,600

ANGOLA

Petrangol SARL-Luanda	32,100		¹ 1,900
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ANTIGUA

West Indies Oil CL-			
St. John's	17,500		¹ 1,900
Total	17,500		3,000

ARGENTINA

Astrasur, Refinerias Patagónicas de			
Petróleo SA-Comodoro Rivadavia	6,300		
Destileria Argentina de Petróleo SA-			
Lomas de Zamora	2,000		
Esso SAPA-Bahia Blanca	17,000		
Campana	94,400	¹ 17,900	¹ 7,900
Isaura SA-Bahia Blanca	12,000		

LEGEND

Numbers identify processes in table.

CAT CRACKING

1. Fluid
2. Thermoform
3. Houdrifiow

CAT REFORMING

Semiregenerative:

1. Conventional catalyst
2. Bimetallic catalyst

Cyclic:

3. Conventional catalyst
4. Bimetallic catalyst

Other:

5. Conventional catalyst
6. Bimetallic catalyst

*All figures are calendar day. Stream day figures not reported.

Company and refinery location	Crude	Catalytic cracking	Catalytic reforming
Shell Cia. Argentina de Petróleo SA-			
Buenos Aires	115,000	21,000	8,500
Yacimientos Petroliferos Fiscales-			
Campo Duran	32,000		
Dock Sud	4,000		
Ensenada	216,000	¹ 41,000	9,000
Lujan de Cuyo	120,000	¹ 16,000	9,000
Plaza Huincul	23,000		2,500
San Lorenzo	35,000		
Total	676,700	95,900	36,900

AUSTRALIA

Amoco Australia PL-Bulwer Island	41,500	¹ 11,000	² 8,500
Ampol Refineries Ltd-Lytton	58,000	¹ 26,000	¹ 13,000
			² 3,200
Australian Oil Refinery PL-Kurnell	129,000	¹ 37,000	¹ 25,300
Australian Lubricating Oil Refinery Ltd.-Kurnell			
BP Australia-Kwinana	100,000	¹ 19,800	¹ 3,000
			² 13,000
Westernport	57,000		² 16,000
Mobil Oil Australia Ltd-Adelaide	21,000		
Petroleum Refineries Australia PL-Adelaide	46,500		² 16,000
Altona	98,600	² 24,000	² 28,000
Shell Refining (Australia) PL-Clyde	69,000	24,000	16,500
Geelong	111,000	23,000	32,000
Total Refineries Australia Ltd.-Matraville	10,000		
Total	741,600	164,800	174,500

AUSTRIA

OeMV-Schwechat	244,000	¹ 19,600	² 22,600
Total	244,000	19,600	22,600

BAHAMAS

Bahamas Oil Refining Co.-Freeport	500,000		
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BAHRAIN

Bahrain Petroleum Co.-Awali	250,000	¹ 34,200	² 17,100
Total	250,000	34,200	17,100

BANGLADESH

Eastern Refinery Ltd.-Chittagong	31,200		¹ 1,720
Total	31,200		1,720

BARBADOS

Mobil Oil Barbados Ltd.-Bridgetown	3,000		
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BELGIUM

Albatros BNV-Antwerp	108,630		² 12,150
BP NV-Antwerpen-Kiel	4,900		
Belgian Shell NV-Ghent	8,600		
Belgische Petroleum Raff.			
NV-Antwerp	77,000		² 19,000
SA Chevron Oil Belgium NV-Feluy	140,000		² 12,000
SA Esso NV-Antwerp	194,000	¹ 24,700	² 29,700
SIBP NV-Antwerp	321,400	¹ 62,200	² 30,200
Texaco Belgium NV-Ghent	180,000		² 20,000
Total	1,034,530	90,900	123,050

BOLIVIA

Yacimientos Petroliferos			
Fiscales Bolivianos-Cochabamba	43,000		¹ 7,000
Santa Cruz	15,000		² 5,900
Sucre	2,700		
Total	60,700		12,900

Company and refinery location	Crude	Catalytic cracking	Catalytic reforming
BRAZIL			
Petróleo Brasileiro SA: Araucária,			
Paraná	120,600	¹ 37,000	.....
Betim, Minas Gerais	72,400	¹ 13,600	.....
Canoas, Rio Grande do Sul	72,400	¹ 13,100	.....
Cubatão, São Paulo	174,900	¹ 48,300	¹ 10,200
Duque de Caxias, Rio de Janeiro	256,900	¹ 34,100	¹ 11,400
Fortaleza, Ceará	4,200	.....	.....
Manaus, Amazonas	9,700	¹ 1,800	.....
Mataripe, Bahia	135,700	¹ 20,800	.....
Mauá, Santo André, São Paulo	33,800	² 14,400	.....
Paulínia, São Paulo	325,700	¹ 39,800	.....
São José dos Campos, São Paulo	181,000	¹ 51,600	.....
Refinaria de Petróleo Ipiranga SA-Rio Grande do Sul	9,300	¹ 2,500	.....
Refinaria de Petróleo de Manguinhos SA-Rio de Janeiro	10,000	.....	.....
Total	1,406,600	277,000	21,600

BULGARIA

Government-owned refineries at Burgas, Pleven, Ruse.

Total	300,000		
BURMA			
Petrochemical Industries Corp.-Chauk			
Syiam	6,300	.....	.....
.....	20,000	.....	.....
Total	26,300		

CAMEROON

Sonara-Ste. Nationale de Raffinage-Pointe Limboh			
.....	43,000	.....	6,500
Total	43,000		6,500

CHILE

Empresa Nacional del Petróleo-			
Concepción	72,000	¹ 12,000	¹ 4,000
Concón	69,000	¹ 20,000	¹ 5,300
Total	141,000	32,000	9,300

CHINA

Government-owned refineries at Anshan, Chin-Hsi, Dairen, Fushun, Hangchow, Karamai-Tushantzu, Lanchow, Lenghu, Maoming, Nanchung, Nanking, Peking, Shanghai, Shengli, Taching, Tientsin, Yumen.

Total	1,810,000		
CHINA REPUBLIC (Taiwan)			
Chinese Petroleum Corp.-Kaohsiung			
.....	425,000	² 9,040	² 20,800
Tao-Yuan	90,410	.....	² 18,080
.....	.....	.....	² 13,560
Total	515,410	9,040	52,440

COLOMBIA

Empresa Colombiana de Petróleos			
-Barrancabermeja-Santander	135,000	¹ 62,000	² 6,000
Cartagena, Bolívar	50,000	¹ 15,000	.....
Orito, Putumayo	1,000	.....	.....
Tibu, N. de Santander	5,000	.....	.....
International Petroleum Colombia Ltd-La Dorada			
.....	5,000	.....	.....
Texas Petroleum Co.-El Guamo	2,500	.....	.....
Total	198,500	77,000	6,000

COSTA RICA

Refinadora Costarricense de Petróleo SA-Limón			
.....	15,000	.....	¹ 1,500
Total	15,000		1,500

CUBA

Government-owned refineries at Cabaiguan, Havana, Santiago de Cuba.

Total	160,000		
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CYPRUS

Larnaca	14,000		¹ 3,000
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Company and refinery location	Crude	Catalytic cracking	Catalytic reforming
CZECHOSLOVAKIA			
Government owned refineries at Bratislava, Kolin, Kralupy, Pardubice, Strazke, Zaluzy, Zvolen.			
Total	455,000		

DENMARK

AS Dansk Shell-Fredericia	59,000	.....	13,000
Dansk Esso AS-Kalundborg	71,000	.....	² 7,800
Gulf Oil Refining AS-Skaelskor	85,000	.....	² 17,100
Total	215,000		37,900

DOMINICAN REPUBLIC

Falconbridge Dominicana C por A-La Peguera			
.....	16,000	.....	.....
Refinaria Dominicana de Petróleo SA-Nigua			
.....	32,000	.....	9,500
Total	48,000		9,500

ECUADOR

CEPE-Esmeraldas	50,300	¹ 11,400	.....
Anglo-La Libertad	32,300	.....	.....
Gulf-La Libertad	6,600	.....	.....
Texaco-Lago-Agrio	1,000	.....	.....
Total	90,200	11,400	.....

EGYPT

Alexandria Petroleum Co.-Alexandria	64,000	.....	.....
El Nasr Petroleum Co.-Alexandria	60,000	.....	.....
Suez	50,000	.....	.....
Suez Oil Processing Co.-Mostord	78,000	.....	7,000
Suez	20,000	.....	.....
Tanta	20,000	.....	.....
Total	292,000		7,000

EI SALVADOR

Refinaria Petrolera Acajutla SA-Acajutla			
.....	16,300		2,800
Total	16,300		2,800

ETHIOPIA

Ethiopian Petroleum SC-Assab	14,430		1,890
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FINLAND

Neste Oy-Naantali	56,000	² 9,500	
Porvoo	243,000	¹ 28,000	¹ 20,000
.....			² 28,000
Total	299,000	37,500	48,000

FRANCE

Cie. Francaise de Raffinage-Gonfreville L'Orcher			
.....	454,000	¹ 28,500	¹ 15,100
.....	.....	.....	² 48,400
La Mede	200,000	¹ 30,000	² 23,400
.....	.....	.....	¹ 17,600
Mardyck	128,000	.....	² 20,500
Cie. Rhénane de Raffinage-Reichstett-Vendenheim			
.....	86,000	.....	12,000
Elf France-Ambes .....	.....	¹ 6,300	.....
Donges	183,000	¹ 13,000	² 30,600
Feyzin	185,000	¹ 15,500	² 9,700
Gargenville	139,000	.....	.....
Grandpuits	100,000	¹ 21,600	² 15,000
Valenciennes	85,000	.....	² 14,500
Esso SAF-Ambes	57,000	.....	¹ 8,100
Fos sur Mer	170,000	¹ 14,300	² 25,700
Port Jerome	160,000	¹ 18,300	² 16,000
.....	.....	.....	¹ 11,000
Mobil Oil Francaise-Frontignon	82,000	² 17,000	² 20,000
Notre Dame de Gravenchon	57,000	.....	² 17,000
Shell Francaise-Berre l'Etang	210,000	18,500	15,000
Paulliac	85,000	18,500	13,000
Petit Couronne	382,000	18,500	41,000
Ste. Francaise des Petroles BP-Dunkirk	86,000	.....	² 11,250
Lavera	174,000	.....	¹ 5,400
Vernon	72,000	.....	² 11,000

Company and refinery location	Crude	Catalytic cracking	Catalytic reforming
Ste. de la Raffinerie de Lorraine-Haucourt (Moselle)	104,000	.....	² 14,500
Ste. de la Raffinerie de Strasbourg-Herrlisheim	92,000	.....	¹ 22,000
Total	3,291,000	220,000	437,750

GABON

Sta. Gabonaise de Raffinage-Port Gentil	20,000		1,400
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GERMANY, EAST

Government-owned

Total	470,000		
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GERMANY, WEST

Caltex Deutschland GmbH-Raunheim	90,000		² 3,700
Deutsche BP AG-Dinslaken	121,000	¹ 16,200	² 15,000
Finkenwerder, Hamburg	59,000	.....	¹ 7,650
Vohburg	102,000	¹ 16,000	² 16,000
Deutsche Marathon Petroleum GmbH-Burghausen	70,000	.....	.....
Deutsche Shell AG-Godorf	180,000	.....	27,000
Harburg-Grasbrook	86,000	12,000	15,000
Ingolstadt	56,000	.....	8,000
Monheim	8,000	.....	.....
Deutsche Texaco AG-Heide	105,000	² 8,000	² 14,000
Elf Bitumenwerke GmbH-Brunsbüttel	7,500	.....	.....
Elf Gelsenberg-Speyer	140,000	.....	² 22,000
Erdol Raffinerie Duisburg GmbH-Duisburg	37,800	.....	² 7,300
Erdolraffinerie Ingolstadt AG-Ingolstadt, Donau	90,000	.....	² 30,000
Erdoel Raffinerie Neustadt GmbH-Neustadt-Donau	144,000	¹ 22,700	¹ 17,700
Erdolwerke Frisia-Emden	45,000	.....	¹ 4,000
Esso AG-Hamburg	110,000	¹ 15,100	² 13,600
Ingolstadt	100,000	¹ 20,200	² 13,600
Karlsruhe	160,000	.....	¹ 16,300
Köln	115,000	.....	² 13,600
Gewerkschaft Erdol-Raffinerie Deurag-Nerag-Misburg	45,000	.....	¹ 8,800
Mobil Oil AG-Wilhelmshaven	160,000	.....	7,000
Worth	75,000	¹ 12,000	² 32,000
Oberrheinische Mineralölwerke GmbH-Karlsruhe	142,000	¹ 52,000	² 10,300
Ölwerke Julius Schindler GmbH-Hamburg	8,800	.....	¹ 19,700
Saarland-Raffinerie GmbH-Völklingen	78,000	.....	.....
Union Rheinische Braunkohlen Kraftstoff AG-Wesseling	125,000	.....	¹ 8,800
Veba Öl AG-Gelsenkirchen	267,000	¹ 5,000	¹ 20,000
Wintershall AG-Lingen	91,400	² 11,900	¹ 27,000
Mannheim	113,700	.....	¹ 7,400
Salzbergen	5,100	.....	² 11,100
Total	2,937,300	191,100	445,350

GHANA

Ghanaian Italian Petroleum CL-Tema.....	26,600		¹ 6,175
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GREECE

Hellenic Aspropyrgos Refinery SA-Aspropyrgos	115,000		¹ 5,200
Motor Oil (Hellas) Corinth Refineries SA-Aghii Theodorí	140,000	¹ 17,500	² 9,500
Petrolia Hellas SA-Eleusis	100,000	.....	8,500
Thessaloniki Refining Co. AE-Thessaloniki	72,000		² 7,100
Total	427,000	17,500	30,300

GUAM

Guam Oil & Refining Co.-Apra Heights ..	43,700		
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Company and refinery location	Crude	Catalytic cracking	Catalytic reforming
GUATEMALA			
Texas Petroleum Co.-Escuintla	16,000	.....	² 3,000
Total	16,000	.....	3,000

HONDURAS

Refinería Texas de Honduras SA-Puerto Cortes	14,000	.....	¹ 1,800
Total	14,000	.....	1,800

HUNGARY

Dunai KV-Százhalmobatta	196,000	.....	² 26,000
Komárom KV-Komárom	32,500	.....	² 4,100
Tisza KV-Leninváros	66,500	.....	.....
Nyirbógdány	6,500	.....	.....
Zalai KV-Zalaegerszeg	10,000	.....	.....
Total	311,500	.....	30,100

INDIA

Assam Oil CL-Digboi	11,500	.....	.....
Bharat Petroleum CL-Mahul, Bombay	120,000	¹ 17,000	7,000
Cochin Refineries Ltd.-Ambalamugal	66,000	.....	5,660
Hindustan Petroleum CL-Visakhapatnam	28,850	¹ 7,700	.....
Indian Oil CL-Barauni	64,000	12,800	.....
Baroda	144,000	7,000	.....
Gauhati	16,400	6,000	.....
Malda	50,000	4,500	.....
Madras Refineries Ltd.-Manali	56,000	.....	¹ 2,400
Total	556,750	55,000	15,060

INDONESIA

Lemigas-Cepu, Central Java	2,000	.....	.....
Pertamina-Balikpapan, Kalimantan	71,250	.....	.....
Cilacap, Central Java	95,000	.....	¹ 11,590
Dumai, Central Sumatra	95,000	.....	² 5,890
Pangakalan Brandan, North Sumatra	4,275	.....	.....
Piaju, South Sumatra	105,640	.....	¹ 15,200
Sungei Gerong, South Sumatra	75,050	¹ 18,525	.....
Sungei Pakning, Central Sumatra	47,500	² 19,000	.....
Wonokromo, East Java	2,500	.....	.....
Total	498,215	37,525	32,680

IRAN

National Iranian Oil Co.-Esfahan	200,000	.....	29,600
Shiraz	40,000	.....	6,245
Tabriz	80,000	.....	.....
Tehran	210,000	.....	28,000
Total	530,000	.....	63,845

Note: Present status uncertain due to Iran-Iraq war.

IRAQ

Oil Refineries Administration-Basra	70,000	.....	.....
Daura	71,000	.....	5,000
K3-Haditha	7,000	.....	.....
Khanaqin	12,000	.....	.....
Muthia	4,500	.....	.....
Qaiyarah, Mosul	2,000	.....	.....
Iraqi Company for Oil Operations-Kirkuk	2,000	.....	.....
Total	168,500	.....	5,000

Note: Present status uncertain due to Iran-Iraq war.

IRELAND

Irish Refining CL-Whitegate	56,000	.....	¹ 14,500
Total	56,000	.....	14,500

ISRAEL

Oil Refineries Ltd.-Ashdod	70,000	.....	9,300
Haifa	120,000	¹ 15,000	15,000
Total	190,000	15,000	24,300

Company and refinery location	Crude	Catalytic cracking	Catalytic reforming
ITALY			
Amoco Italia SpA-Cremona	96,000		² 10,300
ANIC SpA-Gela	80,000	¹ 21,000	² 14,000
Ragusa	7,000		
Anonima Petroli Italiana-Falconara, Marittima	83,000		² 11,000
Aquila SpA-Trieste	110,000		17,000
ERG SpA-Genoa, San Quirico	130,000		9,900
Eso Italiana SpA-Augusta, Siracusa	181,200	¹ 40,100	15,100
Gaeta Industrie Petroli SpA-Gaeta	100,000		9,000
Industrie Chimiche Italiane di Petrolio SpA-Frassino, Mantovano	55,000		9,500
Italiana Petroli-La Spezia	103,000		¹ 20,200
Rho	79,800	² 13,700	² 16,000
Taranto	90,900		² 16,000
Industria Leganti Stradali del Affini (Ilsa)-Como	10,140		1,700
Iplom Raffineria Petroli SpA-Busalla	46,500		
Irom-Industria Raffinazione Oli Minerali-Porto Marghera	108,000		⁴ 17,500
ISAB-Melilli	220,000		² 24,000
Lombarda Petroli SpA-Villasanta	23,500		⁶ 4,000
Mach SpA-Volpiano, Torino	80,000		11,500
Mediterranea SpA-Milazzo, Sicily	505,000	¹ 45,000	10,000
Mobil Oil Italiana SpA-Naples	100,000	² 18,400	² 12,500
Montedipe SpA-Priolo, Siracusa	300,000	¹ 30,000	¹ 10,000
Raffineria Delle Piane SpA-Genoa, San Quirico	3,000		
Raffineria del Po SpA-Sannazaro de Burgondi	230,000	¹ 19,500	⁴ 41,000
Raffineria de Roma SpA-Rome	91,200		² 15,100
Sanquirico SpA-Genoa, San Quirico	32,500		1,500
Saras SpA-Sarroch	360,000	¹ 57,000	² 14,000
Sarcoil SpA-Porto Torres, Sassari	100,000		² 13,000
Sarni SpA-Bertonico	90,000		² 12,000
Sarom-Ravenna	240,000		² 10,000
Sarpom-Trecate, Novara	215,000	¹ 12,000	27,000
Soc. Petroli Italiana-Arcola, La Spezia	30,667		
Stanic-Livorno	111,200		² 19,500
Total	4,002,607	256,700	406,300

IVORY COAST

Ste. Ivoirienne de Raffinage-Abidjan	40,000		⁴ 4,600
Ste. Multinationale de Bitume-Abidjan	10,400		
Total	50,400		4,600

JAMAICA

Eso West Indies Ltd-Kingston	22,000		¹ 3,500
Total	22,000		3,500

JAPAN

Asia Kyoseki CL-Sakaide, Kagawa	142,500	¹ 14,250	² 9,500
Asia Oil CL-Hakodate	23,750		¹ 2,135
Yokohama, Kanagawa	95,000		¹ 8,550
			² 4,750
Chita Oil Ltd-Chita, Aichi	100,000		³ 22,000
Daikyo Oil CL-Yokkaichi City	215,000	¹ 23,500	9,000
Fuji Kosan Oil CL-Kainan	77,600		
Fuji Oil CL-Sodegaura	189,900	¹ 10,800	² 13,600
General Sekiyu Seisei KK-Kawasaki	55,000		² 8,500
Sakai	120,000		² 25,000
Idemitsu Kosan CL-Chita, Aichi	130,000		⁴ 16,000
Himeji, Hyogo	110,000		² 15,000
Ichihara, Chiba	310,000	¹ 39,000	² 29,000
Tokuyama, Yamaguchi	140,000	¹ 20,000	² 12,000
Tomakomai, Hokkaido	70,000		² 11,000
Kashima Oil CL-Kashima, Ibaragi	171,000	¹ 13,300	² 7,125
Koa Oil CL-Manifu	141,550	¹ 12,600	² 9,900
Osaka	76,000	¹ 14,400	² 8,100
Kyokuto Petroleum Ltd.-Chiba	143,000		² 14,500
Kyushu Oil CL-Oita	170,000	¹ 12,000	8,000
Maruzen Oil CL-Chiba	208,000	¹ 23,500	² 22,600
Matsuyama	27,100		² 4,500
Sakai	99,500	¹ 17,600	² 4,500
Shimotsu	20,300	¹ 5,850	² 5,000
Mitsubishi Oil CL-Kawasaki	94,500		² 14,850
Mizushima	243,000	¹ 20,700	² 30,330
Nichimo Sekiyu Seisei KK-Kawasaki	95,000		¹ 7,600
Nihonkai Oil CL-Toyama	60,000		

Company and refinery location	Crude	Catalytic cracking	Catalytic reforming
Nippon Mining CL-Funakawa	14,150		
Mizushima	235,200	¹ 25,000	¹ 23,000
Nippon Oil CL-Niigata	28,000		5,100
Nippon Petroleum Refining CL-Kudamatsu	42,000		² 5,200
Muroran	110,000	¹ 13,000	² 18,000
Negishi	330,000	¹ 25,000	² 31,000
Yokohama	70,000	¹ 5,600	² 3,300
Seibu Sekiyu KK-Onoda	172,000		18,000
Showa Sekiyu KK-Kawasaki	135,000		20,000
Kawasaki	84,000		9,000
Niigata	40,000		4,400
Showa Yokkaichi Sekiyu KK-Yokkaichi	276,000	15,000	31,000
Taiyo Oil CL-Ehime	69,000		² 5,000
Toa Nenryo Kogyo-Kawasaki	191,000	¹ 78,000	² 20,000
Shimizu	50,000		¹ 9,500
Wakayama	187,000	¹ 32,500	¹ 36,000
Toa Oil CL-Kawasaki	100,000		11,000
Toho Oil CL-Owase	40,000		
Tohoku Oil CL-Sendai	100,000		² 13,000
Total	5,601,050	421,600	584,640

JORDAN

Jordan Petroleum Refinery-Zarka	91,330	¹ 4,410	¹ 874
Total	91,330	4,410	²8,640

KENYA

East African Oil Refineries Ltd - Mombasa	79,000		¹ 8,500
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KOREA, N.

Government-owned, Unggi	42,000		
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KOREA, S.

Honam Oil Refinery CL-Yosu	355,000		² 15,300
Korea Oil Corp -Ulsan	265,000		² 17,850
Kuk'ong Oil CL-Busan	12,500		
Kyung In Energy CL-Inchon	60,000		⁴ 3,600
Modern Petroleum CL-Busan	2,000		
Ssangyong Oil Refining CL-Onsan	60,000		
Total	754,500		36,750

KUWAIT

Arabian Oil CL-Ras Al Khafji	30,000		
Getty Oil Co.-Mina Saud	50,000		
Kuwait National Petroleum Co.-Mena Abdulla	106,000		
Mena Al-Ahmadi	250,000		¹ 5,000
Shuaiba	187,000		² 14,000
Total	623,000		19,000

LEBANON

Tripoli Oil Installations-Tripoli	35,000	¹ 7,250	4,392
Mediterranean Refining Co.-Sidon	17,000		¹ 2,900
Total	52,000	7,250	7,292

LIBERIA

Liberia Petroleum Refining-Monrovia	15,000		¹ 2,000
Total	15,000		2,000

LIBYA

Eso Sirte-Marsa El Brega	9,500		¹ 1,500
Libyan National Oil Co.-Azzawiya	120,000		13,000
Total	129,500		14,500

MADAGASCAR

Solima-Managareza, Tamatave	11,440		1,610
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MALAYSIA

Eso Malaysia Berhad-Port Dickson	40,000		¹ 6,000
Sarawak Shell Berhad-Luton	45,000		
Shell Refining Co. Berhad-Port Dickson	90,000		4,000
Total	175,000		10,000

Company and refinery location	Crude	Catalytic cracking	Catalytic reforming
MARTINIQUE			
Ste. Anonyme de la Raffinerie des Antilles-Fort-de-France	11,000	....	2,500

MEXICO

Petroleos Mexicanos-Azcapotzalco	105,000	¹ 23,000	....
Cadereyta	235,000	¹ 40,000	¹ 20,000
Cangrejera	200,000	....	....
Madero	185,000	¹ 51,000	² 15,000
Minatitlan	200,000	¹ 24,000	² 32,000
		² 21,000	....
Poza Rica	16,000	....	....
Reynosa	9,000	....	....
Salamanca	200,000	¹ 40,000	² 24,800
		² 18,000	....
Salina Cruz	170,000	¹ 40,000	⁴ 20,000
Tula, Hidalgo	150,000	¹ 40,000	² 30,000
Total	1,470,000	297,000	141,800

MOROCCO

Samir-Mohammedia	50,000	....	6,500
Ste. Cherifienne des Petroles-Sidi Kacem	22,000	² 5,600	2,700
Total	72,000	5,600	9,200

MOZAMBIQUE

Government owned	16,000		
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NETHERLANDS

BP Raffinaderij Nederland NV—Rotterdam	437,000	¹ 36,000	² 25,000
Chevron Petroleum Mij. (Nederland) BV—Pernis	260,000	....	² 38,000
Esso Nederland BV—Rotterdam	185,000	....	¹ 20,700
		....	² 28,000
Gulf Oil Raffinaderij BV—Europoort	75,500	....	² 8,200
Mobil Oil BV—Amsterdam	62,000	....	² 24,000
Shell Nederland Raffinaderij BV—Pernis	530,000	75,000	54,000
Smid & Hollander BV—Amsterdam	8,000	....	....
Total Raffinaderij Nederland NV—Vlissingen	150,000	....	² 14,000
Total	1,707,500	111,000	211,900

NETHERLANDS ANTILLES

Lago Oil & Transport CL—Aruba	420,000	....	....
Shell Curacao NV—Curacao	362,000	42,000	15,000
Total	782,000	42,000	15,000

NEW ZEALAND

New Zealand Refining-Whangarei	74,000		24,000
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NICARAGUA

Esso Standard SA Ltd.—Managua	14,400		2,850
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NIGERIA

Nigerian Petroleum Refining CL—Alesa Elene	60,000		¹ 6,000
Kaduna	47,500	¹ 19,950	¹ 16,625
Port Harcourt	51,000	....	¹ 5,700
Warri	95,000	¹ 23,750	¹ 16,150
Total	253,500	43,700	44,475

NORWAY

AS Norske Esso—Slagentangen	90,000	....	² 9,000
Valloy	2,700	....	....
AS Norske Shell—Sola	60,000	....	10,000
Rafinor AS—Mongstad	90,000	....	² 10,000
Total	242,700	....	29,000

OKINAWA

Nansei Sekiyu KK—Nishihara	80,000	....	¹ 9,600
Nippon Petroleum Refining CL—Nakagusuku	28,000	....	² 2,000
Okinawa Sekiyu Seisei—Okinawa City	100,000	....	....
Total	208,000	....	11,600

Company and refinery location	Crude	Catalytic cracking	Catalytic reforming
PAKISTAN			
Attock Refinery Ltd.—Rawalpindi	36,000	....	....
National Refinery Ltd.—Korangi, Karachi	42,100	....	¹ 2,210
Pakistan Refinery Ltd.—Karachi	55,000	....	³ 3,000
Total	133,100	....	5,210

PANAMA

Refineria Panama SA—Las Minas	100,000		² 7,500
Total	100,000		7,500

PARAGUAY

Refineria Paraguaya SA—Villa Elisa	7,500		
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PERU

Petroleos del Peru—Iquitos	1,140		
La Pampilla	95,000	¹ 6,365	³ 1,760
Marsella	1,330		
Pucallpa	2,375	....	....
Talara	61,750	¹ 15,884	....
Total	161,595	22,249	1,760

PHILIPPINES

Bataan Refining Corp.—Limay	155,000	² 15,000	¹ 23,800
Caltex (Philippines) Inc.—Batangas	63,000	¹ 8,100	² 8,100
Pilipinas Shell Petroleum—Tabangao	68,000	....	8,300
Total	286,000	23,100	40,200

POLAND

Government-owned refineries at Glinik Mariampolski, Jasto, Jealicze, L. Warzynski, Czechowice, Plock, Trzebinia, Gdansk, Kralaty. Of these, the largest, accounting for roughly 80% of Polish refinery production in mid-1979. Its crude capacity is nearly 300,000 b/d.

Total	385,000		
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PORTUGAL

Petrolgal—Cabo Ruivo		² 11,000	
Leça Palmeira, Porto	139,882		² 26,547
Sines	225,000	....	¹ 27,500
Total	364,882	11,000	54,047

PUERTO RICO

Caribbean Gulf Refining Corp.—Bayamon	38,000	¹ 12,000	⁴ 6,000
Commonwealth Oil Refining CL—Peñuelas	161,000	³ 40,000	² 70,000
Yabucoa Sun Oil Co.—Yabucoa	85,000	....	....
Total	284,000	52,000	76,000

QATAR

National Oil Distribution Co.—Umm Said	13,300		² 1,900
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RUMANIA

Government-owned refineries at Brazi, Pitesti, Sulpacu, Bacau, Borzesti, Brazov, Cimpina, Darmanesti, G. Gheorghiu Dej, Onesti, Ploesti, Telaejen, and Navodari. New grassroots refinery at Navodari went on stream in early 1979 at 75,000 b/d.

Total	617,000		
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SAUDI ARABIA

Arabian American Oil Co.—Ras Tanura	415,000		37,000
Jeddah Oil Refinery—Jeddah	54,250		2,600
Riyadh Oil Refinery—Riyadh	18,082	....	5,786
Total	487,332		45,386

SENEGAL

Ste. Africaine de Raffinage—MBao (Dakar)	18,000		1,900
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SIERRA LEONE

Sierra Leone Petroleum Refining Co.—Freetown	10,000		
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Company and refinery location	Crude	Catalytic cracking	Catalytic reforming
SINGAPORE			
BP Refinery Singapore PL			
Pasir Panjang	28,000	....	....
Esso Singapore PL—Jurong	250,000	¹ 8,600	....
Mobil Oil Singapore PL—Jurong	193,000	....	¹ 3,000
			² 10,000
Shell Eastern Petroleum Ltd.—			
Pulau Bukom	460,000	....	17,000
Singapore Refinery CL—			
Pulau Merlimau	165,000		
Total	1,096,000	8,600	30,000

SOMALIA

Iraqsoma Ref. Co.—Mogadishu	10,000		
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SOUTH AFRICA

Caltex Oil SA PL—Cape Town	90,000	¹ 25,000	² 10,500
Mobil Oil Refining Co.—			
Southern Africa PL—Durban	100,000	¹ 15,000	² 19,000
†Durban	....	....	....
National Petroleum Refiners of			
South Africa PL—Sasolburg OFS	78,500	¹ 18,500	² 11,500
Shell and BP South African			
Petroleum Refineries PL—Durban	155,000	¹ 24,000	² 21,000
Total	423,500	82,500	62,000

†South African Oil Refining Co. is owner; Mobil is operator.

SPAIN

Asfaltos Españoles SA—Tarragona	21,000	....	....
Cia. Española de Petróleos—San Roque			
(Cádiz)	176,000	....	35,000
Tenerife	176,000	....	19,000
Cia. Ibérica Refinadora de			
Petróleos—La Coruña	135,400	....	⁴ 21,400
Enpetrol—Cartagena, Murcia	220,000	....	⁴ 26,000
Puertollano, Ciudad Real	175,000	....	⁴ 17,000
Tarragona	174,000	....	⁴ 16,000
Petróleos del Mediterraneo—			
Castellón de la Plana	120,000	....	² 13,100
Refinería de Petróleos del Norte			
SA—Somorrostro, Vizcaya	240,000	....	² 33,500
Unión Explosivos Rio Tinto SA—			
La Rábida, Huelva	80,000	....	² 14,100
Total	1,517,400	....	195,200

SRI LANKA

Ceylon Petroleum Corp.—			
Sapugaskanda	50,000		² 3,750
Total	50,000		3,750

SUDAN

Port Sudan Refinery Ltd.—Port Sudan	24,000		¹ 2,100
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SWEDEN

AB Nynas Petroleum—Gothenburg	7,500		
Malmö	2,300		
Nynashamn	45,000		6,300
BP Raffinaderi—Gothenburg	106,000	....	² 24,500
Shell Raffinaderi AB—Gothenburg	90,000	....	17,000
Skandinaviska Raffinaderi AB—			
Brofjorden-Lysekil	220,000	....	⁴ 36,000
Total	470,800	....	83,800

SWITZERLAND

Raffinerie de Cressier SA—Cressier	65,000	....	15,000
Raffinerie du Sud-Ouest SA—			
Collombey	72,300	....	² 10,000
Total	137,300	....	25,000

SYRIA

Banias Refining Co.—Banias	120,600	....	14,355
Homs Refinery Co.—Homs	102,440	....	2,620
Total	223,040	....	16,975

TANZANIA

Tanzanian & Italian Petroleum

Company and refinery location	Crude	Catalytic cracking	Catalytic reforming
Refining CL—Kigamboni, Dar es Salaam	13,500	....	² 3,000

THAILAND

Esso Standard Thailand Ltd.—Cholburi	46,000	....	¹ 6,700
Summit Industrial Corp. (Panama)—			
Bangchak, Prakanong	65,000	....	9,500
Thai Oil Refinery CL—Sriracha,			
Cholburi	65,000	8,800	8,700
Total	176,000	8,800	24,900

TOGO

Ste. Togolaise des Hydrocarbures—			
Lomé	20,000	....	⁴ 4,400

TRINIDAD

Texaco Trinidad Inc.—Pointe-a-Pierre	356,000	¹ 25,000	¹ 10,000
Trinidad and Tobago Oil CL—Point			
Fortin	100,000	....	¹ 7,000
Total	456,000	25,000	27,000

TUNISIA

Ste. Tunisienne Industries			
des Raffinage—Bizerte	34,000	....	3,300

TURKEY

Anadolu Tasfiyehanesi AS—Mersin	90,000	....	² 10,500
Istanbul Petrol Rafinerisi AS—Izmit	170,000	¹ 25,000	² 9,500
Turkish Petroleum Corp.—Aliaga	85,700	¹ 12,660	² 8,200
Batman	21,700	² 3,600	² 1,175
Total	367,400	41,260	29,375

UNITED KINGDOM

England			
BP Refinery Kent Ltd.—Isle of Grain	211,000	¹ 16,650	² 33,000
Conoco Ltd.—South Killingholme	130,000	....	² 64,000
Esso Petroleum CL—Fawley	294,000	¹ 81,000	² 29,900
			² 23,400
Lindsey Oil Refinery Ltd.—			
Killingholme, South Humberside	189,000	¹ 33,000	² 33,400
Mobil Oil CL—Coryton, Essex	145,000	¹ 9,500	² 27,000
Philips Imperial Petroleum Ltd.—			
Port Clarence	100,000	....	....
Philmac Oils Ltd.—Eastham, Cheshire	....	....	....
Shell U.K. Ltd.—Shell Haven	175,000	....	44,000
Stanlow	250,000	49,000	38,000
Teessport	107,000	....	15,000
Total	1,601,000	109,150	307,700

Northern Ireland

BP Refinery N.I. Ltd.—Belfast	31,000		² 6,000
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Scotland

BP Refinery Grangemouth Ltd.—			
Grangemouth	173,000	¹ 17,000	² 23,000
Shell U.K. Ltd.—Ardrossan	5,500	....	....
Total	178,500	17,000	23,000

Wales

Amoco UK Ltd.—Milford Haven	102,000	¹ 31,500	² 17,500
BP Refinery Llandarcy Ltd.—			
Llandarcy, Neath	112,000	¹ 18,000	² 19,000
Esso Petroleum CL—Milford Haven,			
Dyfed	174,000	....	² 21,000
Gulf Oil Refining Ltd.—Milford Haven	103,000	....	² 22,000
Texaco Ltd.—Pembroke, Dyfed	180,000	....	² 20,000
Total	671,000	49,500	99,500

Total United Kingdom **2,481,500** **255,650** **435,200**

URUGUAY

Administración Nacional de			
Combustibles, Alcohol y Portland—La			
Teja, Montevideo	45,000	¹ 5,000	¹ 3,000
Total	45,000	5,000	3,000

Company and refinery location	Crude	Catalytic cracking	Catalytic reforming
U.S.S.R.			
Government-owned refineries at Angarsk, Batumi, Fergana, Gorki, Grozny, Guryev, Ishimbai, Khabarovsk, Kherson, Kirishi, Komosomolsk, Krasnovodsk, Kremenchug, Kuibyshev, Lisichansk, Moscow, Mozyr, Baku, Omsk, Orsk, Polotsk, Ryazan, Saratov, Syzran, Tuapse, Ufa, Ukhta, Vannovskiy, Volgograd, Yaroslavl, Pavlodar, Mazheikiai, Drogobych, Nadvornaya, Odessa, Nizhnekamsk, and Perm.			

Total 11,600,000

VENEZUELA			
Corpoven-Bajo Grande	58,450	.....	.....
El Palito	104,000	¹ 42,000	¹ 6,500
El Torenio	4,700	.....	.....
Lagoven-Amuay Bay	630,900	.....	.....
Maraven-Cardon	325,210	¹ 57,600	.....
Meneven-El Chaure	39,500	.....	.....
Puerto La Cruz	156,000	¹ 14,600	.....
San Roque	4,300	.....	.....
Total	1,323,060	114,200	6,500

Note: Caripito, Moron, San Lorenzo, and Tucupita refineries not in operation.

VIRGIN ISLANDS			
Hess Oil Virgin Islands Corp.-St. Croix ..	640,000	.....	70,000

YEMEN, S.			
Aden Refinery Co.-Little Aden	178,000	.....	¹ 12,000

YUGOSLAVIA			
Bosanski Brod	43,129	.....	² 6,360
Lendava	13,500	.....	.....
Novi Sad	11,100	.....	.....
Pancevo	29,878	.....	3,996
Rijeka	160,000	.....	18,500
Sisak	38,800	¹ 1,960	16,300
Zagreb	600	.....	.....
Total	297,007	1,960	45,156

ZAIRE			
Soc. Zairo-Italienne de Raffinage-Muanda ..	17,000	.....	² 3,000

ZAMBIA			
Indeni Petroleum Refinery CL-Bwana			
Mkubwa Area, Ndola	24,500	.....	² 5,600

INACTIVE REFINERIES

Bolivia: YPFB, Camiri, 1,000 b/d.
 England: Burmah-Castrol Co., Ellesmere Port, 25,280 b/d.
 Iran: National Iranian Oil Co., Abadan, 586,500. (Bombad).
 Peru: Petroleos del Peru, Conchan, 7,600 b/d.
 Venezuela: Corpoven, Moron, 22,930 b/d.
 Lagoven, Caripito, 64,100 b/d and Tucupita, 9,000 b/d.
 Maraven, San Lorenzo, 25,780 b/d.

UNITED STATES

Company and location	Crude capacity b/cd	Charge capacity b/d — Cat cracking	Cat reforming
ALABAMA			
Hunt Oil Co.—Tuscaloosa	44,220	.....	² 6,000
Louisiana Land & Exploration Co.—Saraland	43,000	.....	² 13,000
Marion Corp.—Theodore	25,300	.....	² 4,500
Mobile Bay Refining Co.—Chickasaw ..	28,100	.....	.....
Vulcan Refining Co.—Cordova	10,500	.....	.....
Total	151,120	.....	23,500

NR—When this term appears in the crude column, the total reflects conversion from a stream day to a calendar day basis to make the column complete.

Company and location	Crude capacity b/cd	Charge capacity b/d — Cat cracking	Cat reforming
ALASKA			
Atlantic Richfield Corp.—			
Prudhoe Bay	14,000	.....	.....
Chevron U.S.A. Inc.—Kenai	22,000	.....	.....
North Pole Refining, Division of Mapco—North Pole	46,000	.....	.....
Tesoro Petroleum Corp.—Kenai	48,500	.....	² 10,000
Total	130,500	.....	10,000

ARIZONA			
Arizona Fuels Corp.—Fredonia	5,800	.....	¹ 1,500

ARKANSAS			
Berry Petroleum, Division of			
Crystal Oil Co.—Stevens	4,000	.....	.....
Cross Oil & Refining Co. of Arkansas—Smackover	9,800	.....	.....
Macmillan Ring-Free Oil Co.—			
Norphlet	4,400	.....	.....
Tosco Corp.—El Dorado	46,700	¹ 16,000	¹ 9,000
Total	64,900	16,000	9,000

CALIFORNIA			
Anchor Refining Co.—McKittrick	10,000	.....	.....
Atlantic Richfield Co.—Carson	166,000	¹ 58,000	² 38,000
Beacon Oil Co.—Hanford	17,880	.....	² 3,650
Champion Petroleum Co.—Wilmington ..	60,000	.....	² 12,000
Chevron U.S.A. Inc.—Bakersfield	26,000	.....	² 6,000
El Segundo	405,000	¹ 63,000	² 60,000
Richmond	365,000	¹ 63,000	² 84,000
Coastal Petroleum Refiners Inc.—			
Bakersfield	8,500	.....	.....
DeMenno-Kerdoon—Compton	NR	.....	.....
Douglas Oil Co.—Paramount	45,500	.....	² 11,500
Santa Maria	9,500	.....	.....
Eco Petroleum Inc.—Signal Hill	10,000	.....	.....
Edgington Oil Co.—Long Beach	41,600	.....	.....
Exxon Co.—Benicia	106,000	¹ 50,000	² 26,000
Fletcher Oil & Refining Co.—Carson ..	29,500	¹ 10,000	² 4,200
Getty Refining & Marketing Co.—			
Bakersfield	NR	60,000	.....
Golden Bear Division, Witco Chemical Corp.—Oildale	11,000	.....	.....
Golden Eagle Refining Co.—Carson	16,500	.....	.....
Gulf Oil Co.—Santa Fe Springs	51,500	¹ 13,500	² 19,000
Huntway Refining Co.—Wilmington	5,425	.....	.....
Kern County Refinery Inc.—			
Bakersfield	20,000	.....	² 3,000
Lunday-Thagard Oil Co.—South Gate ..	15,000	.....	.....
Macmillan Ring-Free Oil Co.—			
Signal Hill	13,000	.....	.....
Marlex Oil & Refining Inc.—			
Long Beach	20,000	.....	.....
Mobil Oil Corp.—Torrance	123,500	¹ 61,000	² 36,000
Newhall Refining Co.—Newhall	21,400	.....	² 3,300
Oxnard Refinery—Oxnard	4,000	.....	.....
Powerine Oil Co.—Santa Fe Springs ..	44,120	¹ 13,500	² 7,500
Sabre Refining Inc.—Bakersfield	NR	.....	.....
San Joaquin Refining Co.—Oildale	25,550	.....	.....
Shell Oil Co.—Martinez	104,000	¹ 60,000	² 25,000
Wilmington	108,000	¹ 35,000	² 24,000
Sunland Refining Corp.—Bakersfield ..	15,000	.....	² 1,500
Texaco Inc.—Wilmington	75,000	¹ 28,000	² 35,000
Tosco Corp.—Bakersfield	NR	² 12,000	² 16,500
Martinez	126,000	¹ 47,000	¹ 8,700
Union Oil Co. of California—			
Los Angeles	108,000	¹ 45,000	² 49,000
Rodeo	111,000	.....	² 28,000
USA Petrochem Corp.—Ventura	27,900	.....	² 7,500
West Coast Oil Co.—Oildale	21,000	.....	.....
Total	2,487,125	559,000	558,850

COLORADO			
Asamera Oil U.S. Inc.—			
Commerce City	NR	¹ 8,000	² 10,000
Conoco Inc.—Commerce City	32,500	¹ 15,000	² 7,000

Company and location	Crude capacity b/cd	Charge capacity b/cd—Cat cracking	Cat reforming
Gary Refining Co.—Fruita	13,000	.....	² 2,500
Total	83,500	23,000	19,500

DELAWARE

Getty Refining and Marketing Co.— Delaware City	140,000	¹ 62,000	² 42,000
Total	140,000	62,000	42,000

FLORIDA

Seminole Asphalt Refining Inc.— St. Marks	13,000		
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GEORGIA

Amoco Oil Co.—Savannah	24,000		
Young Refining Corp.—Douglasville	3,000		
Total	27,000	.....	.....

HAWAII

Chevron U.S.A. Inc.—Barber's Point	48,000	¹ 22,000	.....
Hawaiian Independent Refinery Inc.—Ewa Beach	67,000	.....	² 13,000
Total	115,000	22,000	13,000

ILLINOIS

Clark Oil & Refining Corp.— Blue Island	66,500	¹ 25,000	² 30,500
Hartford	61,500	¹ 27,000	² 12,000
Marathon Oil Co.—Robinson	195,000	¹ 38,000	¹ 12,400
			² 24,000
Mobil Oil Corp.—Joliet	180,000	¹ 98,000	² 46,000
Shell Oil Co.—Wood River	283,000	¹ 94,000	² 22,000
			³ 68,000
Texaco Inc.—Lawrenceville	84,000	¹ 34,000	² 24,000
Union Oil Co. of California—Lemont	151,000	¹ 58,000	² 30,500
Total	1,021,000	374,000	280,400

INDIANA

Amoco Oil Co.—Whiting	380,000	¹ 145,000	⁴ 90,000
Gladioux Refinery Inc.—Ft. Wayne	18,600	.....	.....
Indiana Farm Bureau Cooperative Association Inc.—Mt. Vernon	20,600	¹ 7,000	² 3,500
Industrial Fuel & Asphalt of Indiana Inc.—Hammond	9,400	.....	.....
Laketon Asphalt Refining Inc.— Laketon	8,100	.....	.....
Rock Island Refining Corp.— Indianapolis	43,200	¹ 19,000	² 8,700
Total	479,900	171,000	102,200

KANSAS

CRA Inc.—Coffeyville	56,500	¹ 23,000	² 9,600
Phillipsburg	26,400	¹ 8,500	¹ 5,300
Derby Refining Co.—Wichita	28,800	² 10,800	² 7,000
Getty Refining & Marketing Co.— El Dorado	80,577	¹ 31,000	² 25,000
Mobil Oil Corp.—Augusta	50,000	² 22,100	¹ 10,400
			⁴ 12,500
National Cooperative Refinery Association—McPherson	54,150	¹ 20,000	² 13,000
Pester Refining Co.—El Dorado	30,500	¹ 14,500	² 6,000
Phillips Petroleum Co.—Kansas City	80,000	¹ 33,500	² 21,000
Total Petroleum—Arkansas City	42,500	¹ 13,000	¹ 16,300
Total	449,427	176,400	126,100

KENTUCKY

Ashland Petroleum Co.—Catlettsburg	NR	¹ 60,000	² 18,000
			⁶ 27,000
Louisville	NR	¹ 10,000	² 3,000
Somerset Refinery Inc.—Somerset	5,500	.....	⁴ 1,000
Total	239,288	70,000	49,000

LOUISIANA

Atlas Processing Co., Division of Pennzoil—Shreveport	45,000	.....	¹ 5,000
			² 10,000

UNITED STATES

Survey of operating refineries (capacities as of January 1, 1982)

State	No. plants	Crude Crude capacity b/cd	—Charge capacity, b/cd— Cat cracking fresh feed	Cat reforming
Alabama	5	151,120	.....	23,500
Alaska	4	130,500	.....	10,000
Arizona	1	5,800	.....	1,500
Arkansas	4	64,900	16,000	9,000
California	40	2,487,125	559,000	558,850
Colorado	3	83,500	23,000	19,500
Delaware	1	140,000	62,000	42,000
Florida	1	13,000	.....	.....
Georgia	2	27,000	.....	.....
Hawaii	2	115,000	22,000	13,000
Illinois	7	1,021,000	374,000	280,400
Indiana	6	479,900	171,000	102,200
Kansas	9	449,427	176,400	126,100
Kentucky	3	239,200	70,000	49,000
Louisiana	30	2,663,856	888,900	445,880
Maryland	2	29,200	.....	.....
Michigan	5	130,000	45,000	34,400
Minnesota	2	192,850	76,000	51,000
Mississippi	7	372,900	72,200	95,400
Missouri	1	104,000	42,000	16,000
Montana	6	154,060	50,000	44,100
Nebraska	1	5,600	2,400	750
Nevada	1	4,500	.....	.....
New Jersey	5	698,700	227,000	117,500
New Mexico	7	121,683	27,100	25,250
New York	2	105,200	23,000	11,500
North Dakota	2	60,500	26,000	12,000
Ohio	5	521,300	185,700	159,700
Oklahoma	13	568,500	192,400	138,400
Oregon	1	15,000	.....	.....
Pennsylvania	9	707,650	249,300	211,900
Tennessee	1	49,000	30,000	9,300
Texas	56	4,881,981	1,587,500	1,170,900
Utah	7	162,030	54,000	26,200
Virginia	1	53,000	28,000	9,500
Washington	7	389,030	91,500	110,000
West Virginia	3	22,100	.....	6,400
Wisconsin	1	40,000	9,700	10,000
Wyoming	10	209,330	80,000	37,050
	273	17,669,442	5,461,100	3,978,180

Company and location	Crude capacity b/cd	Charge capacity b/sd Cat cracking	Cat reforming
Calumet Refining Co.—Princeton	NR	.....	.....
Canal Refining Co.—Church Point	7,858	.....	¹ 1,600
Cities Service Co.—Lake Charles	330,000	¹ 150,000	² 46,000
Claiborne Gasoline Co.—Lisbon	6,500	.....	¹ 2,200
Clark Oil Mt. Airy Refinery—Mt. Airy	NR	.....	.....
Conoco Inc.—Lake Charles	156,500	¹ 30,600	² 21,000
Cotton Valley Solvents (Kerr-McGee Refining Corp.)—Cotton Valley	7,800	.....	.....
CPI Refining Inc.—Lake Charles	NR	.....	¹ 600
Evangeline Refining Co.—Jennings	NR	.....	.....
Exxon Co.—Baton Rouge	474,000	¹ 160,000	⁴ 100,000
GHR Energy Corp.—Good Hope	NR	¹ 140,000	² 5,500
Gulf Oil Corp.—Belle Chasse	198,900	¹ 89,000	² 40,000
Hill Petroleum Co.—Krotz Springs	48,000	.....	² 12,000
International Processors—St. Rose	32,500	.....	.....
Kerr McGee Corp.—Dubach	10,780	.....	¹ 3,480
LaJet Inc.—St. James	40,000	.....	.....
Lake Charles Refining Co.—Lake Charles	32,000	.....	.....
Mallard Resources Inc.—Gueydon	6,000	.....	.....
Marathon Oil Co.—Garyville	255,000	¹ 75,000	⁶ 50,000
Murphy Oil Corp.—Meraux	92,500	¹ 35,300	⁶ 23,000
Placid Refining Co.—Port Allen	36,000	¹ 16,500	² 5,500
Port Petroleum Inc.—Stonewall	3,200	.....	.....
Schulze Processing Inc.—Talla Bena	1,768	.....	.....
Shell Oil Co.—Norco	257,000	¹ 100,000	² 18,000
Sooner Refining Co.—Egan	8,000	.....	² 28,000
South Louisiana Production Co.—Mermentau	15,000	.....	.....
T&S Refining Inc.—Jennings	10,200	.....	.....
Tenneco Oil Co.—Chalmette	114,000	¹ 22,500	² 28,000
Texaco Inc.—Convent	140,000	¹ 70,000	² 30,000
Total	2,663,856	888,900	445,880

MARYLAND

Amoco Oil Co.—Baltimore	15,000	.....	.....
Chevron U.S.A. Inc.—Baltimore	14,200	.....	.....
Total	29,200	.....	.....

MICHIGAN

Crystal Refining Co.—Carson City	4,000	.....	.....
Lakeside Refining Co.—Kalamazoo	5,600	.....	¹ 2,000
Marathon Oil Co.—Detroit	68,500	¹ 27,000	² 17,000
Osceloa Refining Co.—West Branch	12,000	.....	¹ 1,400
Total Petroleum Inc.—Alma	NR	¹ 18,000	¹ 14,000
Total	139,000	45,000	34,400

MINNESOTA

Ashland Petroleum Co.—St. Paul Park	NR	¹ 23,000	² 13,000
Koch Refining Co.—Rosemount	127,300	¹ 53,000	³ 18,000
			² 20,000
Total	192,850	76,000	51,000

MISSISSIPPI

Amerada-Hess Corp.—Purvis	30,000	² 16,200	5,400
Chevron U.S.A. Inc.—Pascagoula	280,000	¹ 56,000	² 90,000
Ergon Refining Inc.—Vicksburg	20,600	.....	.....
Natchez Refining Inc.—Natchez	20,000	.....	.....
Southland Oil Co.—Lumberton	5,800	.....	.....
Sandersville	11,000	.....	.....
Vicksburg Refining Inc.—Vicksburg	5,500	.....	.....
Total	372,900	72,200	95,400

MISSOURI

Amoco Oil Co.—Sugar Creek	104,000	¹ 42,000	³ 16,000
Total	104,000	42,000	16,000

MONTANA

Cenex—Laurel	40,400	¹ 12,000	² 12,000
Conoco Inc.—Billings	52,500	¹ 15,000	² 14,400
Exxon Co.—Billings	45,000	² 11,000	¹ 14,500
Flying J Inc.—Cut Bank	5,600	.....	² 2,200

Company and location	Crude capacity b/cd	Charge capacity b/sd Cat cracking	Cat reforming
Kenco Refining Inc.—Wolf Point	NR	.....	.....
Simmons Refining Co.—Great Falls	6,000	¹ 2,000	⁴ 1,000
Total	154,060	50,000	44,100

NEBRASKA

CRA Inc.—Scottsbluff	5,600	¹ 2,400	¹ 750
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NEVADA

Nevada Refining Co.—Tonopah	4,500		
Total	4,500		

NEW JERSEY

Chevron U.S.A. Inc.—Perth Amboy	168,000	³ 33,000	² 39,000
Exxon Co.—Linden	265,000	¹ 120,000	³ 17,000
			⁴ 25,000
Mobil Oil Corp.—Paulsboro	99,700	¹ 34,000	² 23,500
Seaview Petroleum Inc.—West Deptford	NR	80,000	.....
Texaco Inc.—Westville	90,000	¹ 40,000	² 13,000
Total	696,700	227,000	117,500

NEW MEXICO

Caribou Four Corners Inc.—Kirtland	2,750	.....	² 1,500
Giant Industries Inc.—Farmington	13,500	.....	³ 5,000
Navajo Refining Co.—Artesia	NR	¹ 14,500	¹ 1,700
			² 6,000
Plateau Inc.—Bloomfield	16,800	¹ 5,400	¹ 2,250
Shell Oil Co.—Ciniza	18,000	¹ 7,200	² 6,800
Southern Union Refining Co.—Lovington	36,100	.....	.....
Thriftway Co.—Bloomfield	6,100	.....	² 2,000
Total	121,683	27,100	25,250

NEW YORK

Ashland Petroleum Corp.—North Tonawanda	NR	¹ 23,000	² 11,500
Cibro Petroleum Products Inc.—Albany	42,500	.....	.....
Total	105,200	23,000	11,500

NORTH DAKOTA

Amoco Oil Co.—Mandan	56,000	¹ 26,000	⁴ 10,000
Flying J Inc.—Williston	4,500	.....	² 2,000
Total	60,500	26,000	12,000

OHIO

Ashland Petroleum Co.—Canton	NR	¹ 25,000	⁶ 20,000
Gulf Oil Co.—Cincinnati	43,700	¹ 18,000	² 11,000
Standard Oil Co. of Ohio—Lima	168,000	¹ 37,700	² 47,000
Toledo	120,000	¹ 55,000	³ 40,700
Sun Co.—Toledo	125,000	¹ 50,000	² 41,000
Total	521,300	185,700	159,700

OKLAHOMA

Allied Material Corp.—Stroud	8,000	.....	.....
Champlin Petroleum Co.—Enid	53,800	¹ 19,500	² 15,000
Conoco Inc.—Ponca City	134,000	¹ 45,000	² 33,000
Hudson Refining Co.—Cushing	19,000	¹ 7,500	² 4,500
Kerr-McGee Refining Corp.—Wynnewood	43,000	¹ 20,000	² 8,500
Oklahoma Refining Co.—Cyril	15,300	¹ 7,400	² 1,000
Custer County	10,300	.....	.....
Okmulgee Refinery—Okmulgee	24,000	² 8,000	.....
Sun Co.—Tulsa	88,500	¹ 30,000	⁴ 25,000
Texaco Inc.—Tulsa	50,000	¹ 18,000	² 20,000
Tonkawa Refining Co.—Arnett	12,600	.....	² 1,450
			⁴ 1,450
Tosco—Duncan	48,000	¹ 25,000	² 8,000
Total Petroleum Corp.—Ardmore	62,000	¹ 12,000	¹ 22,500
Total	568,500	192,400	138,400

OREGON

Chevron U.S.A. Inc.—Portland	15,000	.....	.....
Total	15,000	.....	.....

Company and location	Crude capacity b/cd	Charge capacity b/cd Cat cracking	Cal reforming
PENNSYLVANIA			
Atlantic Richfield Co.—Philadelphia	125,000	¹ 29,000	² 60,000
BP Oil Corp.—Marcus Hook	168,000	¹ 48,000	⁶ 50,000
Gulf Oil Co.—Philadelphia	174,100	¹ 79,300	² 34,000
Kendall-Amalie Division, Witco Chemical Co.—Bradford	6,800	.....	² 2,000
Pennzoil Co.—Rouseville	14,600	.....	² 3,600
Quaker State Oil Refining Corp.—Farmers Valley	6,500	.....	² 2,000
Sun Cl—Marcus Hook	165,000	¹ 75,000	¹ 13,100 ² 31,200
United Refining Co.—Warren	41,000	¹ 18,000	² 16,000
Valvoline Oil Co., Division of Ashland Oil Co.—Freedom	NR	.....	.....
Total	707,650	249,300	211,900

TENNESSEE

Delta Refining Co.—Memphis	49,000	¹ 30,000	² 9,300
Total	49,000	30,000	9,300

TEXAS

American Petrofina Inc.—Big Spring	60,000	¹ 23,000	² 23,000
Port Arthur	90,000	¹ 24,000	¹ 20,000
Amoco Oil Co.—Texas City	415,000	¹ 144,000	⁴ 144,000
Atlantic Richfield Co.—Houston	222,000	¹ 78,000	² 68,000
Brio Refining Inc.—Houston	16,000	.....	.....
Champion Petroleum Co.—Corpus Christi	173,000	¹ 69,000	² 6,300 ⁶ 25,000
Charter International Oil Co.—Houston	NR	¹ 50,000	² 13,500
Chevron U.S.A. Inc.—El Paso	76,000	¹ 21,000	² 25,000
Clinton Manges Oil & Refining Co.—Tucker	9,700	.....	.....
Coastal States Petroleum Co.—Corpus Christi	182,000	¹ 9,500	¹ 15,000 ⁶ 20,000
Copano Refining—Ingleside	NR	.....	.....
Crown Central Petroleum Corp.—Houston	100,000	¹ 50,000	² 14,000 ⁶ 22,000
Diamond Shamrock Corp.—Sunray	71,100	¹ 45,000	² 16,000
Dorchester Refining Co.—Mt. Pleasant	26,500	² 9,600	² 3,500
Eddy Refining Co.—Houston	3,500	.....	⁶ 1,500
Erickson Refining Co.—Port Neches	45,000	.....	.....
Exxon Co. U.S.A.—Baytown	640,000	¹ 170,000	³ 84,000 ⁴ 65,000
Flint Chemical Co.—San Antonio	1,200	.....	.....
Gulf Oil Co.—Port Arthur	335,000	¹ 110,000	² 109,500
Gulf States Oil & Refining Co.—Corpus Christi	NR	.....	.....
Howell Hydrocarbon Inc.—San Antonio	NR	.....	¹ 1,200
Independent Refining Corp.—Winnie	50,000	.....	² 16,000
Koch Refining Co.—Corpus Christi	57,000	¹ 25,000	¹ 11,000 ³ 13,000
LaGloria Oil & Gas Co.—Tyler	65,000	¹ 17,000	² 7,000 ⁶ 11,700
Liquid Energy Corp.—Bridgeport	10,000	.....	.....
Listo Petroleum—Donna	3,656	.....	.....
Longview Refining Co., Division of Crystal Oil Co.—Longview	14,000	.....	⁴ 4,000
Marathon Oil Co.—Texas City	69,500	¹ 38,000	¹ 8,000
Mobil Oil Corp.—Beaumont	325,000	¹ 100,500	² 102,000 ² 18,000
Phillips Petroleum Co.—Borger	95,000	¹ 52,000	¹ 7,000 ² 19,000
Sweeny	175,000	¹ 87,000	² 36,000
Pioneer Refining Ltd.—Nixon	15,500	.....	.....
Placid Refining Co.—Mont Belvieu	12,400	.....	.....
Pride Refining Inc.—Ablene	NR	.....	.....
Quintana Petrochemical Co.—Corpus Christi	NR	.....	² 18,000
Quitman Refining Co.—Quitman	6,600	.....	.....
Saber Energy Inc.—Corpus Christi	NR	.....	.....
Sentry Refining Inc.—Corpus Christi	NR	.....	.....
Shell Oil Co.—Deer Park	285,000	¹ 70,000	² 15,000 ³ 40,000

Company and location	Crude capacity b/cd	Charge capacity b/cd Cat cracking	Cal reforming
Odesa	30,600	¹ 10,500	¹ 11,000
Sigmoil Refining Co.—Three Rivers	37,800	¹ 17,000	² 8,000
South Hampton Refining Co.—Silsbee	19,000	.....	² 4,000
Southwestern Refining Co.—Corpus Christi	104,000	¹ 47,000	² 30,000
Tesoro Petroleum Corp.—Carrizo Springs	26,100	.....	² 3,000
Texaco Inc.—Amarillo	20,000	¹ 8,000	² 5,000
El Paso	17,000	¹ 7,000	² 3,500
Port Arthur	402,000	¹ 135,000	² 60,000
Port Neches	31,000	.....	.....
Texas Armada Refining Co.—Fort Worth	5,000	.....	.....
Texas City Refining Inc.—Texas City	119,600	¹ 40,000	² 11,000 ⁶ 12,000
Texas Oil & Chemical Terminal—Vidor	.....	.....	.....
Thriftway Inc.—Graham	2,400	.....	.....
Tipperary Corp.—Ingleside	10,400	.....	.....
Uni Refining Inc.—Ingleside	NR	.....	.....
Union Oil Co. of California—(Beaumont), Nederland	120,000	38,000	² 34,000
Winston Refining Co.—Fort Worth	20,000	¹ 3,400	¹ 1,700 ² 3,500
Total	4,881,981	1,587,500	1,170,900

UTAH

Amoco Oil Co.—Salt Lake City	39,000	¹ 18,000	⁴ 6,000
Caribou Four Corners Inc.—Woods Cross	8,300	.....	² 2,000
Chevron U.S.A.—Salt Lake City	45,000	¹ 11,000	² 5,500
Husky Oil Co.—North Salt Lake City	25,000	³ 7,000	² 5,000
Phillips Petroleum Co.—Woods Cross	24,000	² 8,400	² 4,700
Plateau Inc.—Roosevelt	8,000	¹ 5,200	.....
Wesreco Inc.—Woods Cross	NR	.....	² 3,000
Total	162,030	54,000	26,200

VIRGINIA

Amoco Oil Co.—Yorktown	53,000	¹ 28,000	⁴ 9,500
Total	53,000	28,000	9,500

WASHINGTON

Atlantic Richfield Co.—Ferndale	115,000	.....	² 43,000
Chevron U.S.A. Inc.—Seattle	5,500	.....	.....
Mobil Oil Corp.—Ferndale	71,500	² 25,500	² 9,500 ⁴ 11,500
Shell Oil Co.—Anacortes	91,000	¹ 36,000	² 20,000
Sound Refining Inc.—Tacoma	4,030	.....	.....
Texaco Inc.—Anacortes	78,000	¹ 30,000	² 20,000
U.S. Oil & Refining Co.—Tacoma	24,000	.....	² 6,000
Total	389,030	91,500	110,000

WEST VIRGINIA

Pennzoil Co., Elk Refining Division—Falling Rock	5,600	.....	² 2,000
Quaker State Oil Refining Corp.—Newell	11,700	.....	² 3,200
St. Mary's	4,800	.....	² 1,200
Total	22,100		6,400

WISCONSIN

Murphy Oil Corp.—Superior	40,000	¹ 9,700	⁴ 10,000
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WYOMING

Amoco Oil Co.—Casper	48,000	¹ 13,000	⁴ 5,900
Husky Oil Co.—Cheyenne	28,800	¹ 12,000	¹ 1,000 ² 5,500
Cody	11,500	⁴ 4,000	² 1,800
Little America Refining Co.—Casper	24,500	¹ 12,500	² 6,100 ² 6,500
Mountaineer Refining Co.—LaBarge	280	.....	.....
Sage Creek Refining Co.—Cowley	1,000	.....	.....
Silver Eagle Oil Inc.—LaBarge	NR	.....	.....
Sinclair Oil Corp.—Sinclair	NR	¹ 21,000	¹ 10,000

Company and location	Crude capacity b/cd	Charge capacity b/cd Cat cracking	Cat reforming
Texaco Inc.—Casper	21,000	¹ 7,000	² 4,000
Wyoming Refining Co.—Newcastle	12,500	² 4,000	¹ 2,750
Total	209,330	80,000	37,050

INACTIVE REFINERIES:

1. Adobe Refining Co., LaBlanca, Tex.—5,000 b/cd.
2. Amoco Oil Co., Wood River, Ill.—104,000 b/cd.
3. Ashland Petroleum Co., Findlay, Ohio—21,000 b/cd (on standby).
4. ATC Petroleum Inc., Newington, N. H.—13,000 b/cd.
5. ATC Petroleum Inc., Wilmington, N. C.—11,900 b/cd.
6. Bayou State Oil Corp., Hosston, La.—3,000 b/cd.
7. Bi-Petro Refining Co., Pana, Ill.—8,000 b/cd.
8. Bruin Refining Inc., St. James, La.—19,300 b/cd.
9. Carbonit Refining Inc., Hearne, Tex.—11,000 b/cd.
10. C&H Refining Inc., Lusk, Wyo.—190 b/cd.
11. Conoco Inc., Wrenshall, Minn.—23,500 b/cd.
12. Dow: Oyster Creek Refining, Freeport, Tex.—190,000 b/cd (on standby).
13. Energy Cooperative Inc., East Chicago, Ind.—126,000 b/cd.
14. E-Z Serve Refining, Shallow Water, Kan.—10,000 b/cd.
15. Gibson Oil & Refining Co., Bakersfield, Calif.—4,600 b/cd.
16. Glacier Park Co., Osage, Wyo.—9,500 b/cd.
17. Gulf Oil Co., Toledo, Ohio—50,300 b/cd.
18. Gulf Oil Co., Venice, La.—28,700 b/cd.
19. Kentucky Oil & Refining, Troy, Ind.—1,107 b/cd.
20. Kentucky Oil & Refining, Betsy Layne, Ky.—400 b/cd.
21. Manatee Energy Co., Palmetto, Fla.—28,400 b/cd.
22. Mid-America Refining Co., Chanute, Kan.—3,100 b/cd.
23. Mobil Oil Corp., Buffalo, N.Y.—43,000 b/cd.
24. Morrison Petroleum Co., Woods Cross, Utah—2,000 b/cd.
25. Northland Oil & Refining, Dickinson, N.D.—5,200 b/cd (no response).
26. Pacific Refining Co., Hercules, Calif.—85,000 b/cd.
27. Road Oil Sales, Bakersfield, Calif.—6,000 b/cd (no response).
28. Shepherd Oil Inc., Mermentau, La.—10,000 b/cd.
29. Southland Oil Co., Yazoo City, Miss.—5,500 b/cd.
30. Southwestern Refining, Labarge, Wyo.—800 b/cd (no response).
31. Texaco Inc., Lockport, Ill.—72,000 b/cd.
32. Vedette Oil Refining, Brownsville, Tex.—10,000 b/cd.
33. Wireback Oil Co., Plymouth, Ill.—1,800 b/cd.

CANADA

Company and location	Crude capacity b/cd	Charge capacity b/cd Cat cracking	Cat reforming
ALBERTA			
Gulf Canada Ltd.—			
Calgary	12,900	.....	.....
Edmonton	80,100	¹ 33,000	¹ 4,500
Husky Oil Operations Ltd.—			² 10,000
Lloydminster	11,300	.....	¹ 1,000
Imperial Oil Ltd.—Edmonton	151,800	¹ 47,100	² 22,000
Shell Canada Ltd.*—Bowden	5,000	.....	² 2,500
Texaco Canada Inc.*—Edmonton	28,000	¹ 9,000	¹ 5,000
Total	289,100	90,100	45,832

*All figures calendar day. Stream day figures not reported.

NR—When this term appears in the crude column, the tota reflects conversion from a stream day to a calendar day basis to make the column complete.

Company and location	Crude capacity b/cd	Charge capacity b/cd Cat cracking	Cat reforming
BRITISH COLUMBIA			
Chevron Canada Ltd.*—North Burnaby ..	35,000	¹ 10,000	² 11,700
Gulf Canada Ltd.—Kamloops	9,500	¹ 3,000	² 1,900
Port Moody	37,200	¹ 12,000	² 10,500
Husky Oil Operations Ltd.—			
Prince George	9,400	¹ 3,000	¹ 1,400
Imperial Oil Ltd.—loco	40,700	¹ 12,700	¹ 6,500
Petro-Canada Exploration Inc.—Taylor ..	15,950	¹ 6,600	¹ 3,000
Shell Canada Ltd.*—Shellburn	22,000	¹ 6,000	² 2,700
Total	171,800	44,492	38,615

*All figures calendar day. Stream day figures not reported.

MANITOBA

Shell Canada Ltd.*—St. Boniface	30,000	¹ 7,500	8,200
Total	30,000	8,333	9,111

*All figures calendar day. Stream day figures not reported.

NEW BRUNSWICK

Irving Oil Ltd.—St. John	NR	¹ 19,000	² 38,500
Total	237,500	19,000	38,500

NEWFOUNDLAND

Ultramar Canada Inc.—Holyrood	13,000	.....	² 1,300
Total	13,000		1,300

NORTHWEST TERRITORIES

Imperial Oil Ltd.—Norman Wells	2,900		
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NOVA SCOTIA

Imperial Oil Ltd.—Dartmouth	82,000	¹ 24,000	² 9,000
Texaco Canada Ltd.*—Halifax	20,000	¹ 7,200	² 3,600
Total	102,000	32,000	13,000

*All figures are calendar day. Stream day figures not reported.

ONTARIO

BP Canada Inc.—Oakville	80,000	¹ 24,000	¹ 5,250
Gulf Canada Ltd.—Clarkson	76,600	¹ 19,500	² 12,000
Imperial Oil Ltd.—Sarnia	126,100	¹ 26,000	² 9,000
Shell Canada Ltd.*—Oakville	44,000	14,000	² 17,000
Sarnia	74,000	¹ 16,000	² 14,000
Sun Co.—Sarnia	90,000	² 17,000	² 7,000
Texaco Canada Ltd.*—Nanticoke	95,000	¹ 40,000	² 23,300
Total	585,700	164,276	154,581

*All figures are calendar day. Stream day figures not reported.

QUEBEC

BP Canada Inc.—Montreal	71,000	¹ 20,000	² 12,000
Gulf Canada Ltd.—Montreal	71,700	¹ 22,000	² 9,000
Imperial Oil Ltd.—Montreal	79,500	¹ 23,000	² 11,500
Petro-Canada—			
Pointe-Aux-Trembles	90,000	² 20,000	² 32,000
Shell Canada Ltd.*—Montreal East	120,000	¹ 23,500	² 23,000
Texaco Canada Ltd.*—Montreal	74,500	¹ 26,500	² 12,000
Ultramar Canada Inc.—St. Romuald	100,000	.....	² 15,000
Total	610,300	140,555	118,388

*All figures are calendar day. Stream day figures not reported.

SASKATCHEWAN

Consumer's Cooperative			
Refineries Ltd.—Regina	40,000	¹ 14,000	¹ 10,000
Gulf Oil Canada Ltd.—Moose Jaw	13,300	.....	.....
Total	53,300	14,000	10,000

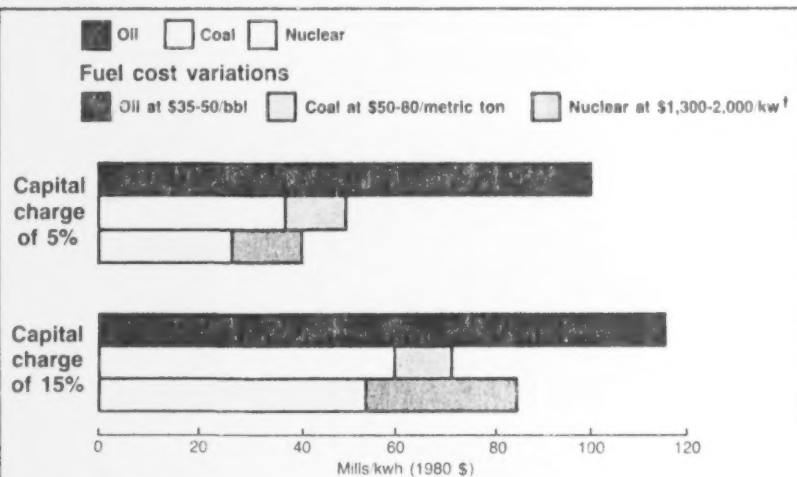
U.S. synfuels feasibility studies*

Company	Location	Products Coal gasification	Oil equiv. (b/d)	Remarks
Pacific Gas & Electric Co.	San Ardo, Calif.	MBG†	775	Coal and waste
Occidental Petroleum Corp.	Tuft, La.	MBG, gasoline, steam, electricity	25,000	—
Mass. Mun. Wholesale Electric Co.	Ludlow, Ma.	MGB for electricity	17,000	—
Public Service Co. of N.M.	San Juan Co., N.M.	Gas for electricity	3,500	Underground gasification
American Natural Service Co.	Nerco Co., N.D.	SNG, gasoline	20,000	Lignite
Northern Natural Gas Co.	Oliver Co., N.D.	SNG, methanol	43,100	Lignite
Philadelphia Gas Works	Philadelphia, Pa.	MBG, chemicals	6,120	—
Westinghouse Electric Corp.	Beaverdale, Pa.	MBG, methanol	50,000	—
Micrex Corp.	Georgetown, S.C.	MBG, iron ore	4,310	—
Mountain Fuel Resources	Emery Co., Utah	SNG, methanol	22,000	—
Mobay Chemical Corp.	New Martinsville, W. Va.	MBG/fuel, power	3,700	—
Ohio Valley Synfuels	Mason Co., W. Va.	SNG, methanol	86,260	—
Westinghouse Electric	Marion Co., W. Va.	MBG/fuel, power	2,560	—
Florida Power	Pinellas Co., Fla.	MBG, power	7,458	Combined cycle
General Refractories	Florence, Ky.	LBGS/fuel	1,034	—
Central Maine Power	Waldo Co., Ma.	MBG/electricity	14,138	Combined cycle
EG & G	Fall River, Ma.	MBG/electricity	28,500	Combined cycle & methanol
Crow Indians	Crow reservation, Mont.	SNG	22,000	Lurgi
Texas Eastern Synfuels	San Juan Co., N.M.	SNG, methanol	43,000	Lurgi
Republic of Texas Coal Co.	Gulf Coast	MBG/methanol, gasoline	1,440	With Mitchell Energy
Transco Energy - Union Carbide Corp.	Calvert, Tex.	MBG	21,550	—
	Texas City, Tex.	MBG	21,550	—
Liquefaction				
Natomas Energy Co.	Utah of Calif.	Oil	20,000	Tar sands
Standard Oil Co. (Indiana)	Sunnyside, Utah	Bitumen	20,000	Tar sands
Koppers Co. Inc.	Oak Ridge, Tenn.	Liquids	48,750	Coal
Great National Corp.	Sunnyside, Utah	Liquids	25,000	Tar sands
Enpex Corp.	Maverick Co., Tex.	Liquids	15,000	Tar sands
Syntana-Utah	Bonanza, Utah	Liquids	30,000	Shale
IT & T	Nitro, W. Va.	Gasoline, LPG	97,000	—
W.R. Grace & Co.	Moffat Co., Colo.	Methanol	14,000	Stage 3
Clark Oil & Ref.	Illinois	Syngas/gasoline	11,600	Mobil-M
Transco Energy	Lewis Co., Ky.	Liquids	50,000	2,000 b/d module
Houston Nat. Gas	Convant, La.	Methanol	11,400	—
Amax Inc.	Duluth, Minn.	Methanol	6,800	—
Nakota Co.	Dunn, N.D.	Methanol (85,000 b/d)	40,000	Lurgi
Celanese Corp.	Bishop, Tex.	Methanol	10,000	—
Hampshire Energy	Gillette, Wyo.	Gasoline	18,000	—
White River Shale Oil	Vernal, Utah	Liquids	5,000	Demo unit 1984; nahcolite ore
Magic Circle Energy Corp.	Cottonwood Wash, Colo.	Liquids	30,000	Core holes drilled

*Partial listing. Some studies are privately funded, others funded by DOE or proposed for funding with U.S. agencies. †Medium BTU gas. §Low BTU gas.

387

How nuclear fuel cost will compare in 1990*



*For electric power generation. Assumes a load factor of 51%. †Capex variation.
Source: Royal Dutch/Shell Group

Worldwide synfuels activity*

Country	Type	Feed volume	Sponsor(s)	Process	Products	Status
Australia (Queensland)	Shale		Esso Exploration; Southern Pacific Petroleum; Central Pacific Minerals	Lurgi, Tosco to be tested	Shale oil, 20,000 b/d (phase 1)	Phase 1 design, estimate complete. One stream '86. Phase 2 begins in '90
Australia (Queensland)	Shale		Central Minerals; So. Pac. Petroleum	Lurgi-Ruhrgas	Shale oil	Demonstration unit planned
Australia (Victoria)	Coal	50 t/d	Kominic (Kobe Steel Mitsubishi Chem.; Nissho Iwai; Australian gov't.)		Coal liquids	Construction began in mid-1981; stage 2, 300,000 t/d by early '90s in 5 or 6 units
Australia (Queensland)	Coal	5 t/d	Milmeran Coal	SRC	Coal liquids	Stage 1, \$83 million. Feasibility study under way for 10,000 t/d plant
Brazil (Sao Mateus do Sul)	Shale		Petrobras	Petrosix	Shale oil, 25,000	Completion 1986 b/d
Brazil (San Jeronimo)	Coal	2,400 t/d	Petrobras	Koppers-Totzek	Ammonia, 600 t/d	Completion 1984 (\$200 million)
Canada (Fort McMurray)	Tar sands		Alsands		Syncrude, 140,000 b/d	Completion 1986 (\$6 billion)
Canada (Fort McMurray)	Tar sands		Home oil		Syncrude, 125,000 b/d	Approved (\$2 billion)
Canada	Tar sands		Suncor		Syncrude, 15,000 b/d	Expansion complete in 1981 (\$180 million)
China	Coal		Government		Ammonia, 1,000 t/d; methanol, 300 t/d	
China (Maoming)	Shale		Government		Shale oil	Feasibility study by Tosco of 100 tons shale
F.R. Germany (Rhine area)	Coal	2.2 million t/year (ultimate)	Rheinische Braunkohlenwerke	Winkler	Syngas, 35.3 billion cu ft/year; methanol, 1,000 t/d	First train completed '83-'84; 3 more trains '87
F.R. Germany (Gelsenkirchen)	Coal	200 t/d	Veba Oel	Bergius-Pier	Gasoline, 30 t/d; middle oil, 70 t/d; gas (pilot), 40 t/d	Completion 1981
F.R. Germany (Wilhelmshaven)	Coal (imported)	2,000 t/d	Shell	Shell	Synthetic gas demonstration plant	Completion '85; make methanol after '86; Phase 2 hike 5,000 t/d by '92; possible 17,000 t/d by '98 (\$1.7 billion)

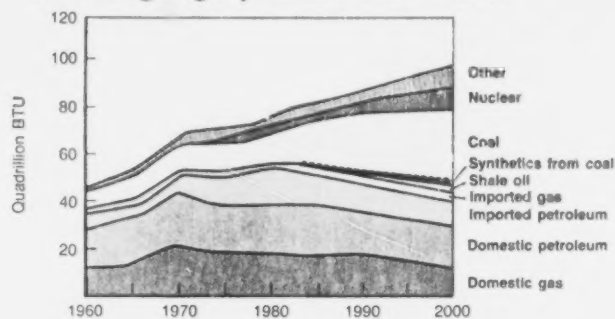
Country	Type	Feed volume	Sponsor(s)	Process	Products	Status
F.R. Germany (Wilhelmshaven)	Coal (imported)	1 million t/year	Mobil	Texaco or Lurgi	Synthetic gas	Completion '87; expansion to 6 million t/year by '89, maybe further expansion.
Japan (Hasaki)	Coal	10 t/d	Sumitomo		Synthetic gas	Plans for 250 t/d liquefaction, 1,000 t/d gasification plants.
Netherlands	Coal	100 t/d	Exxon		Methane pilot	Completion 1985 (\$500 million).
Netherlands (Moerdijk)	Coal	1,000 t/d	Shell	Shell-Koppers	Synthetic gas, 71 MMcfd	Completion 1983.
Poland (Libiaz)	Coal		Kopex	Koppers-Totzek	Medium BTU syngas, 102 MMcfd	Completion 1984 (\$1.2 billion).
South Africa (Secunda)	Coal	40,000 t/d	Sasol	Fischer-Tropsch		Completion '82; expansion phases 3, 4; (\$2 billion).
South Africa	Coal	3.5 million t/year (ultimate)	Sentrachem; Hoechst		Methanol, ammonia	Planned; ammonia phase could start up by 1984.
Scotland (Westfield, Fife)	Coal	150 t/d		Composite gasifier	Synthetic gas	Completion 1983 (\$72 million).
Sweden (Gothenburg)	Coal	150 t/d	Svenska Petroleum Technology	Texaco	Synthetic fuel gas pilot	
United Kingdom (North Wales)	Coal	Two @ 25 t/d	NCB; British Gas	NCB	Coal liquids	Engineering, feasibility study for 2 demo plants; completion 1983
U.S.S.R. (Moscow area)	Coal	10 t/d	Government	Hydrogenation (Soviet process)	Gasoline, kerosene, diesel, gas turbine fuel, 2.5 t/d @	Completion 1983.
U.S.S.R. (Western Siberia)	Coal	300 t/d (est.)	Government	Hydrogenation (Soviet process)	Coal liquids, 75 t/d	Construction to begin in 1982.
U.S.S.R. (Tomsk, Gubaha)	Coal		Government	Methanol synthesis		Awarded \$350 million contract.

*Partial listing, covering some of the more significant projects.

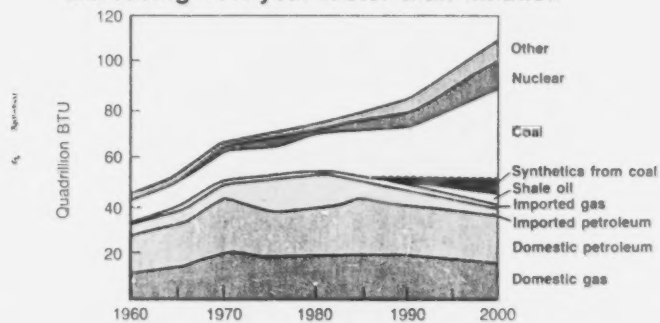
How world oil prices affect U.S. energy supply

1

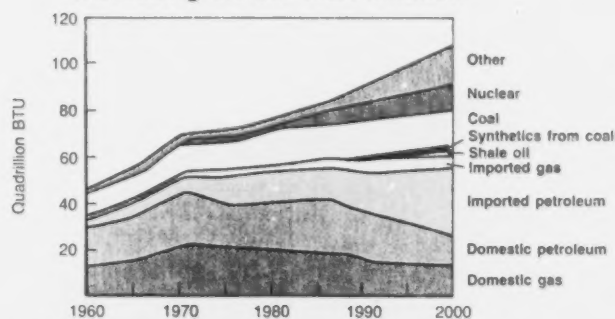
Increasing slightly faster than inflation



Increasing 10%/year faster than inflation

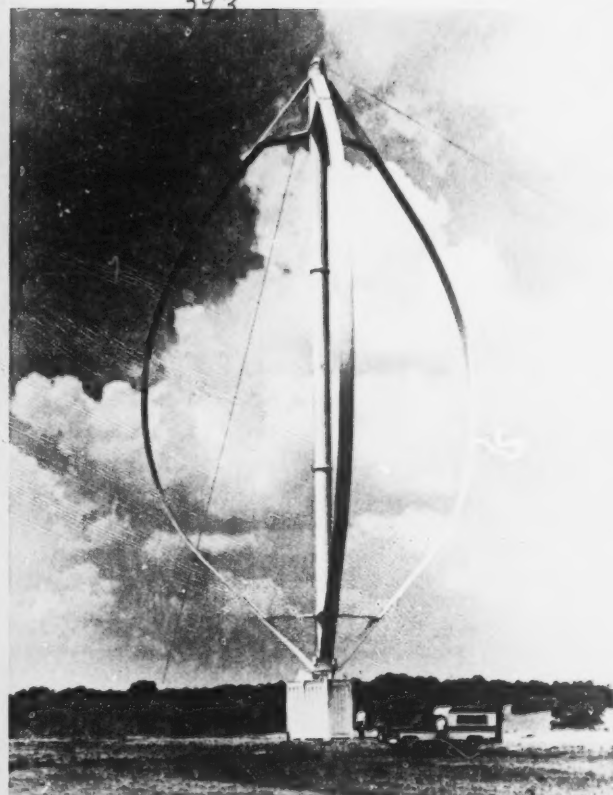


Increasing slower than inflation



Source: Gulf Oil Corp.

393



WIND POWER is being developed throughout the U.S. in an effort to back out fuel oil in the generation of electricity. Much of the research centers around development of a commercial model of two prototypes, represented here by the vertical axis wind turbine generator, a 500 kw Alcoa-Darrieus unit (left), and the horizontal axis wind turbine generator, a 3,000 kw Bendix-Schachle unit. Both units pictured are operated by Southern California Edison Co. at its test site near Palm Springs, Calif.

U.S. synfuels projects: coal, shale, tar sands

Sponsor	Location	Process	Products, MMcf/d	Feed, t/d	Status
Coal					
High BTU gasification					
Great Plains Gasification Ass'n.	Mercer County, N.D.	Lurgi-dry ash	125	*14,000	Waiting final approval on rate structure; on stream 1984.
Conoco Coal Development	Noble County, Ohio	British Gas/ Lurgi slagging	19	1,250	Engineering; status to be determined.
Illinois Coal Gasification Group	Perry County, Ill.	Cogas/Coed	†18	2,200	Engineering; probably cancelled.
Tenneco Coal Gasification	Wibaux, Mont.	Lurgi	280	*40,000	Engineering; cooperative with DOE.
Medium or low BTU gasification					
Cool Water Coal Gasification	Daggett, Calif.	Texaco	†67	1,000	Financing; start-up 1983.
Memphis Light, Gas & Water	Memphis, Tenn.	U-gas	150	3,100	Engineering; EIS filed; proposal to SFC.
Gulf States Utilities	West Lake, La.	—	225	1,400	—
TVA Coal Gasification	Murphy Hill, Ala.	Texaco	\$300	20,000	1985-87.
Mountain Fuel Resources	Salt Lake City, Utah	Entrained flow	—	30	Test unit 1982.
Allis Chalmers	Wood River, Ill.	KilnGas	†	600	Demonstration unit, 1983.
Liquefaction for fuels					
International Coal Refining	Newman, Ky.	SRC-I	Products, b/d 20,000	6,000	Demo plant 1984; status doubtful.
SRC International Inc.	Morgantown, W. Va.	SRC-II	20,000	6,000	Scrapped.
Exxon	Baytown, Tex.	EDS	600	250	Pilot unit, onstream.
Ashland Synthetic Fuels Inc.	Catlettsburg, Ky.	H-Coal	600-1,800	200-600	Pilot unit, onstream.
Texas Eastern Synfuels	Henderson, Ky.	Lurgi/ Fischer-Tropsch	*50,000	28,000	Proposed cooperative agreement with DOE.
Liquefaction for gasoline, chemicals					
W.R. Grace	Baskett, Ky.	Texaco/Mobil-M	50,000	29,000	Preliminary engineering; onstream 1986.
Tennessee Eastman	Kingsport, Tenn.	Texaco/Scientific Design	||	1,600	Onstream late 1983.
Tennessee Synfuels	Oakridge, Tenn.	Kellog/Mobil-M	9,000	5,480	1985; rejected by DOE.
Ashland Oil	South Point, Ohio	—	**4,000	—	—
Mapco Inc.	Moore County, Tex.	—	††1,419	—	Engineering/design; onstream 1982.

Sponsor	Location	Process	Products, MMcfd	Feed, t/d	Status
TVA Mobil R&D Corp.	Muscle Shoals, Ala. Buffalo, Wyo.	Texaco Mobil-M	+ + 40,000	200 —	Onstream. Engineering; cooperative with DOE.
Shale					
Paraho Development Corp.	Bonanza, Utah	Surface retort	30,000	45,000	Slated onstream 1986; proposed cooperative agreement with DOE.
Colony Shale Oil	Grand Junction, Colo.	Surface retort	47,000	66,000	Engineering/design; scheduled onstream 1985.
Rio Blanco Oil Shale	Rangely, Colo.	Modified in situ, surface retort	50,000	—	Demo plant, 2,000 b/d; Lurgi surface retort under construction.
Superior Oil Co.	Rifle, Colo.	Surface retort	15,000	20,000	Proposed cooperative agreement with DOE.
Tosco	Parachute Creek, Colo.	Surface retort	48,300	—	Mid-1980's.
Union Oil Co. of California	Parachute Creek, Colo.	Upflow retort modules	10,000	—	Onstream 1983, scale-up to 50,000 b/d by 1988.
Cathedral Bluffs (Occidental, Tenneco)	Rio Blanco Co., Colo.	Surface retort, modified in situ	55,000	60,000	Engineering/design; 94,000 b/d by 1990; mine under construction.
Geokinetics	Vernal, Utah	In situ	20,000	—	Dev. unit onstream; scale-up 1983.
Chevron Oil Shale	Garfield County, Colo.	—	50,000	—	Demo plant 1982; scale-up by early 1990s.
Ramex Synfuels Int'l Inc. Tosco Oil Shale	Duchesne, Utah Vernal, Utah	In situ Surface retort	— 50,000	— 66,000	Commercial plant by 1984. Late 1980s.
Tar sands					
Great Basins Hydrocarbons	Green River, Utah	Koppers-Totzek	60,000	—	—
Aarian Development In.	Eastern Utah	ADI/Chemical	20,000	—	1986.
Western Tar Sands	Raven Ridge, Utah	—	100	—	Pilot unit.
Standard Oil Co. (Ohio)	Vernal, Utah	Solvent extraction	24	60	Pilot unit 1984.
Pittston Co.	Western Kentucky	—	500	—	Pilot unit for 12,000 b/d demo plant.
Enercor	Asphalt Ridge, Utah	Hot water extraction	50	—	Pilot unit.

*Lignite. †Plus 2,400 b/d of fuel. ‡For combined cycle power generation.

\$Plus liquid fuels. *Oil equivalent plus 145 MMcfd high BTU gas and chemicals.

**Methanol. ††Ammonia, 135 t/d. ||Methanol/acetic anhydride plus steam generation.

Summary of major announced shale oil projects

Table 1

Commercial	Sponsors	Technology	Location	Announced production capacity, b/d year
White River Shale Project (U-a/U-b)	Sun, Phillips, Sohio	Surface Retorting	Utah	100,000 (1992)
C-b (Cathedral Bluffs)	Occidental, Tenneco	Modified in-situ & surface retorting	Colorado	55,000 (1988)
Colony	Exxon, Tosco	Surface Retorting	Colorado	48,000 (1985)
Chevron	Standard of California	Surface	Colorado	5,000 (1982)
Superior	Superior, Cleveland Cliffs, Sohio	Surface	Colorado	50,000 (1988)
Union Long Ridge	Union	Surface retorting	Colorado	15,000 (1986)
Paraho	14 + companies	Surface	Colorado	50,000 (1988)
Parachute	Mobil	Surface	Utah	30,000 (1985)
C-a (Rio Blanco)	Gulf, Standard of Indiana	Surface	Colorado	50,000 (1990)
		Surface retorting modified in-situ	Colorado	76,000 (1987)
Demonstration				
Geokinetics	DOE	True in-situ retorting	Utah	—
Hytort	GRI, IGT, Phillips	Hydrogen retorting	Eastern U.S.	—
Multi Mineral	Charter	Modified in-situ	Colorado	—
Occidental, Logan Wash	Occidental	Modified in-situ	Colorado	—

Table 2

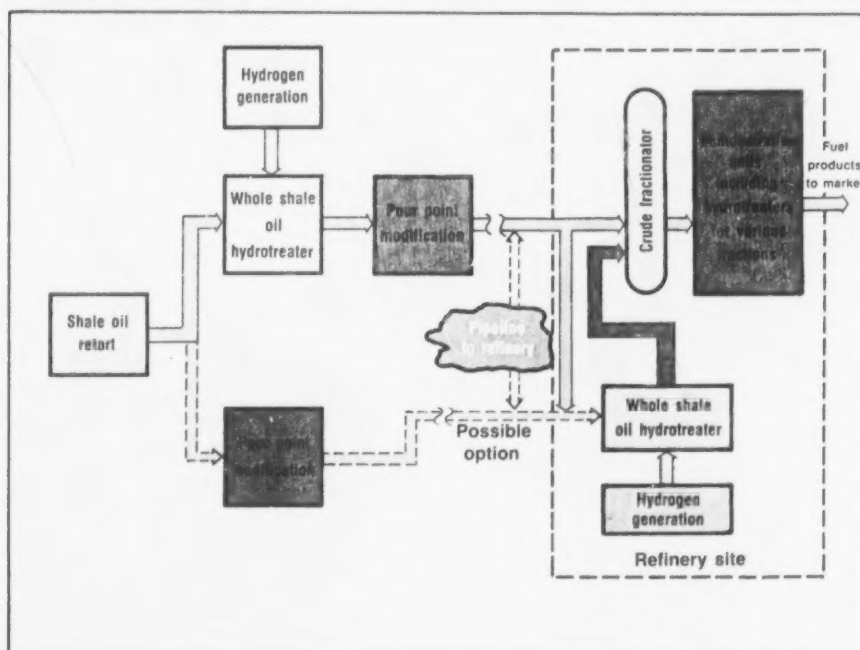
Sample physical properties of crude shale oil

PROCESS Type	TOSCO Indirect recycle solids surface retort	PARAHO Indirect recycle solids surface retort	PARAHO Direct combustion surface retort	OCCIDENTAL Direct combustion modified in-situ	BUREAU OF MINES Direct combustion true in-situ
Properties					
Gravity, °API	21.0	20.2	19.3	25.0	28.4
Sulfur, wt%	0.67	0.66	0.71	0.64	0.52
Nitrogen, wt%	1.85	2.18	2.00	1.30	1.47
Pour point, °F.	70	90	85	50	--
Arsenic, ppm	40	28	--	--	--
Iron, ppm	--	70	--	--	--
Distillation (Vol%)					
Light straight run					
IBP-250°F.	2.7	1.5	--	--	1.0
Heavy naphtha					
250-400°F.	11.7	4.5	1.5	4.7	13.0
Kerosine					
400-525°F.	9.6	10	6.5	17.3	29.0
Diesel					
525-650°F.	11.0	15	16.9	23.8	23.0
Vacuum gas oil					
650-850°F.	24.0	36	32.9	38.4	15.0
850 + °F.	41.0	33	42.2	15.8	19.0
1050 + °F.	17.6	--	9.0	4.5	--

Table 3

*Nitrogen contents for petroleum crudes based on 525 F. to 1000 F. cuts.

2



402

Table 4

**Yields from coking
paraho shale oil***

	Bbl	%
Shale oil feed	9,956	100
Products		
Gasoline	1,180	12
Jet fuel	1,660	17
Diesel	2,080	21
Heavy fuel oil	2,360	24
Subtotal liquids	7,280	74
Coke, 1,000 lb	424	--
Wt%	--	13

*Gary Western refinery, Colorado, 1975

Table 5

**Product distribution
from refinery runs
on paraho shale oil***

Product	Liquid yields vol %
Gasoline, C4-325°F.	11
JP-5, 325-480°F.	26
Diesel, 480-650°F.	31
Fuel oil, 650°F. +	32

*Sohio, Toledo, Ohio refinery

403

Fuel growth rates for the U.S.

Table 6

	1985-2000 (Cumulative %)
Leaded gasoline	-10.9
Unleaded gasoline	0.8
Total gasoline	-0.8
Jet fuel	2.2
Diesel fuel	4.8
No. 2 fuel oil	-2.7
Residual fuel	-0.7

Whole shale oil hydrotreater economics*

Table 7

	\$ million, 1980
• Investment (on-sites/off-sites)	150
• Operating costs \$/bbl	
-Processing cost, excluding hydrogen	1.80
-Manufactured hydrogen (1650 scf/bbl)	2.70
Total processing costs	4.50
-Capital related charges	2.75
Total operating costs	\$7.25

*Basis: 50,000 b/d unit

Shale oil production forecast

Table 8

	1990	2000
Base case	250	1,200
Alternative case	350	1,500

410

Non-Communist pipeline construction in 1982

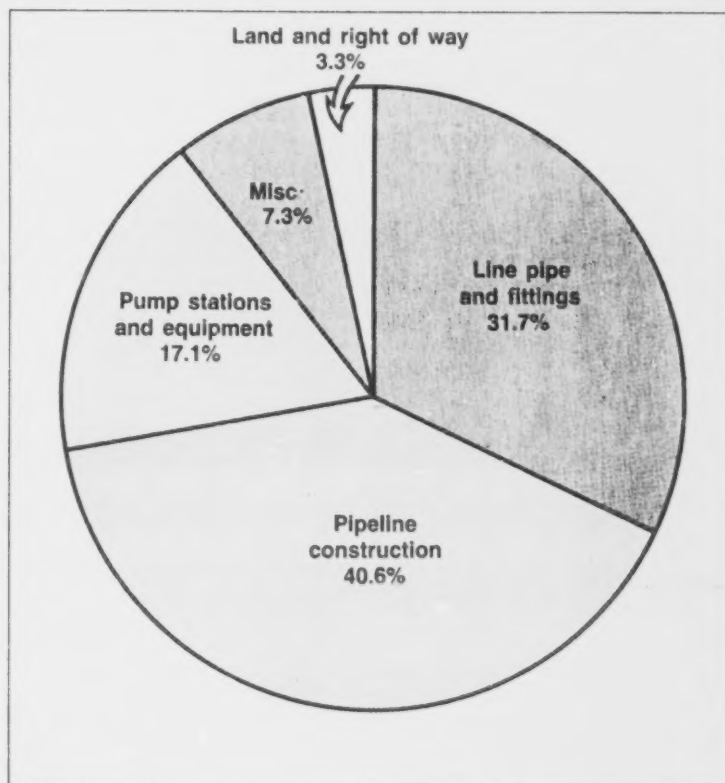
Area	4-10 in.	12-20 in.	22-30 in. Miles	Larger than 30 in.	Total
GAS PIPELINES					
U.S.	3,453	2,028	4,462	2,031	11,974
Canada	676	819	375	867	2,737
Latin America	489	835	826	1,998	4,148
Asia-Pacific	63	380	477	183	1,103
Western Europe	82	194	459	764	1,499
Middle East	20	201	118	—	339
Africa	200	25	120	—	345
Total gas	4,983	4,482	6,837	5,843	22,145
CRUDE PIPELINES					
U.S.	171	82	35	—	288
Canada	100	82	89	—	271
Latin America	31	263	58	204	556
Asia-Pacific	196	375	—	—	571
Western Europe	—	—	—	—	—
Middle East	126	35	30	23	214
Africa	6	36	1,098	6	1,146
Total crude	630	873	1,310	233	3,046
PRODUCT PIPELINES					
U.S.	212	269	639	391	1,511
Canada	401	—	—	—	401
Latin America	266	535	—	—	801
Asia-Pacific	418	377	409	—	1,204
Western Europe	150	142	—	—	292
Middle East	25	10	—	—	35
Africa	180	7	317	—	504
Total product	1,652	1,340	1,365	391	4,748
NON-COMMUNIST WORLD TOTALS					
Gas	4,983	4,482	6,837	5,843	22,145
Crude	630	873	1,310	233	3,046
Product	1,652	1,340	1,365	391	4,748
Total	7,265	6,695	9,512	6,467	29,939

Non-Communist pipeline construction in 1982 and beyond*

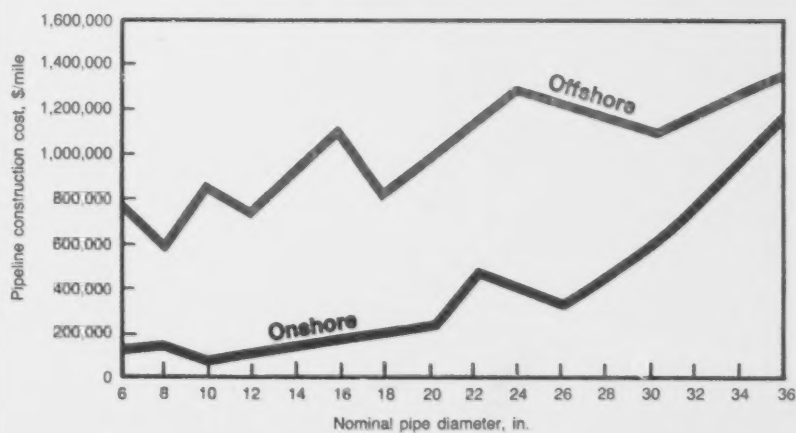
Area	4-10 in.	12-20 in.	22-30 in.	Larger than 30 in.	Total
Miles					
GAS PIPELINES					
U.S.	3,526	2,142	6,213	5,789	17,670
Canada	1,056	1,199	755	5,866	8,876
Latin America	489	2,722	1,040	1,998	6,249
Asia-Pacific	80	430	1,406	183	2,099
Western Europe	82	275	1,148	2,081	3,586
Middle East	20	201	118	365	704
Africa	200	25	120	—	345
Total gas	5,453	6,994	10,800	16,282	39,529
CRUDE PIPELINES					
U.S.	171	586	35	1,491	2,283
Canada	100	602	89	—	791
Latin America	31	263	58	204	556
Asia-Pacific	196	375	—	—	571
Western Europe	—	338	45	—	383
Middle East	377	35	30	23	465
Africa	6	36	1,098	6	1,146
Total crude	881	2,235	1,355	1,724	6,195
PRODUCT PIPELINES					
U.S.	221	436	639	391	1,678
Canada	401	—	—	—	401
Latin America	961	2,095	—	—	3,056
Asia-Pacific	418	377	409	—	1,204
Western Europe	150	142	—	—	292
Middle East	261	10	—	—	271
Africa	180	7	317	—	504
Total product	2,583	3,067	1,365	391	7,406
NON-COMMUNIST WORLD TOTALS					
Gas	5,453	6,994	10,800	16,282	39,529
Crude	881	2,235	1,355	1,724	6,195
Product	2,583	3,067	1,365	391	7,406
Total	8,917	12,296	13,520	18,397	53,130

*Projects planned and under way.

Investment split—crude oil pipelines



Average pipeline construction costs



FERC Construction Permit Applications, June 1990-May 1991

Table 1

Investment in liquids pipelines

Item	Company and investment, \$					Total, \$	Percent
	A	B	C	D	E		
CRUDE PIPELINES INVESTMENT BY FIVE COMPANIES							
Land.....	1,461,463	899,155	294,320	715,724	1,017,226	4,387,888	0.3
Right of way.....	12,058,479	1,237,068	316,178	14,769,835	13,897,726	42,279,286	3.0
Line pipe.....	130,171,278	31,083,158	12,827,069	88,654,475	145,993,060	408,729,040	28.6
Line pipe fittings.....	6,437,994	1,958,358	1,869,379	14,795,046	19,134,324	44,195,101	3.1
Pipeline construction..	177,205,808	33,083,867	17,151,957	178,758,598	174,865,073	581,065,303	40.6
Buildings.....	12,440,420	5,331,111	2,465,082	9,068,267	8,664,028	37,968,908	2.7
Boilers.....	...	...	...	...	...	...	...
Pumping equipment...	19,242,464	6,870,909	2,582,712	14,327,283	43,133,684	86,157,052	6.0
Machine Tools and machinery.....	...	...	...	33,140	1,170	34,310	...
Other station equipment.....	60,542,688	16,264,761	3,898,233	20,760,464	18,034,552	119,505,698	8.4
Oil tanks.....	13,285,070	8,463,462	5,663,872	16,013,636	20,917,381	64,343,421	4.5
Delivery facilities.....	...	1,805,270	5,169,297	2,383,207	2,183,388	11,541,162	0.8
Communication systems.....	...	2,181,015	4,709	8,441,730	1,448,641	12,076,095	0.8
Office furniture & equipment.....	232,777	163,973	142,579	369,535	570,940	1,479,604	0.1
Vehicles & other work equip.	4,116,941	1,380,497	350,969	3,867,443	6,065,518	15,781,368	1.1
Other property.....	...	...	...	...	49,795	49,795	...
Total	437,195,382	110,727,604	52,736,356	372,958,383	455,976,506	1,429,594,231	100.0
PRODUCT PIPELINES INVESTMENT BY FIVE COMPANIES							
Land.....	4,309,614	1,674,016	353,845	852,997	2,492,685	9,683,157	0.4
Right of way.....	26,031,612	10,728,399	13,768,204	8,105,212	6,811,843	65,445,270	2.5
Line pipe.....	335,797,961	67,480,797	99,913,277	85,023,170	106,907,243	695,122,448	27.1
Line pipe fittings.....	67,814,904	12,326,802	10,712,223	1,560,280	13,939,466	106,353,675	4.1
Pipeline construction..	527,621,655	107,508,659	161,599,185	91,899,190	145,231,312	1,033,860,001	40.3
Buildings.....	18,537,211	3,726,110	2,764,548	9,642,733	14,546,460	49,217,062	1.9
Boilers.....	...	...	...	...	...	...	...
Pumping equipment...	42,902,112	5,746,831	11,458,444	27,280,945	21,806,760	109,195,092	4.2
Machine Tools and machinery.....	...	...	...	...	865,085	865,085	...
Other station equipment.....	100,153,526	19,697,831	22,872,562	22,251,643	56,483,406	221,458,968	8.6
Oil tanks.....	46,530,066	16,371,624	4,225,124	16,277,009	32,843,361	116,247,184	4.5
Delivery facilities.....	...	...	9,337,353	10,522,591	30,641,318	50,501,262	2.0
Communication systems.....	542,424	215,022	1,347,282	7,280,964	...	9,385,692	0.4
Office furniture & equipment.....	6,842,266	1,138,834	595,985	424,036	961,584	9,962,705	0.4
Vehicles & other work equip.	2,962,167	1,196,869	3,870,478	1,435,011	3,505,691	12,970,216	0.5
Other property.....	65,389,314	...	14,193,002	...	...	79,582,316	3.1
Total	1,245,434,832	247,811,794	357,011,512	282,555,781	437,036,214	2,569,850,133	100.0

Table 2

10-year onshore construction-cost trend

Size	Fiscal year*	R.O.W.	Material	Average cost, \$/mile		Total	Range, \$/mile	
				Labor	Misc.		Low	High
8-in.	1981	7,801	46,010	83,581	14,498	151,890	(†)	(†)
	1980	6,614	59,068	52,243	17,432	135,358	55,625	193,000
	1979	1,189	40,692	63,518	14,951	123,350	50,374	581,916
	1978	1,590	32,123	30,554	8,660	72,927	61,614	109,956
	1977	1,403	34,423	27,002	8,963	71,791	28,844	126,063
	1976	.....	.....	.....	.....	.....	.....	.....
	1975	2,561	11,948	29,915	8,732	53,155	37,898	75,896
	1974	1,504	11,785	19,242	1,599	34,130	(†)	(†)
	1973	1	16,360	13,500	1,240	31,100	(†)	(†)
	1972	550	10,310	12,475	7,500	30,835	(†)	(†)
								
								
12-in.	1981	3,197	68,361	39,672	19,205	130,435	(†)	(†)
	1980	13,785	70,967	92,268	29,336	221,356	166,582	377,419
	1979	1,590	46,062	47,283	7,121	102,056	96,822	158,185
	1978	6,697	55,362	61,919	13,830	137,808	(†)	(†)
	1977	4,332	34,429	22,658	4,573	65,992	53,839	177,694
	1976	.....	.....	.....	.....	.....	.....	.....
	1975	2,135	20,908	24,401	3,396	50,841	44,909	52,249
	1974	2,400	18,570	28,385	2,725	52,080	(†)	(†)
	1973	7,080	17,100	30,000	7,240	61,380	27,230	97,990
	1972	1,700	16,250	15,365	2,820	36,135	26,385	59,300
								
								
16-in.	1981	.....	.....	.....	.....	.....	.....	.....
	1980	9,446	88,864	46,582	28,274	173,166	147,200	197,895
	1979	.....	.....	.....	.....	.....	.....	.....
	1978	7,506	54,936	54,117	12,552	129,111	86,898	203,721
	1977	3,635	50,574	32,260	9,347	95,817	68,897	145,915
	1976	3,248	80,373	26,575	9,419	119,615	(†)	(†)
	1975	1,512	29,290	19,629	4,367	54,798	45,001	121,922
	1974	2,251	22,464	32,020	10,135	66,870	45,040	112,613
	1973	2,040	23,050	16,600	1,700	43,390	37,400	52,100
	1972	1,950	23,650	16,050	2,060	43,910	38,570	88,280
								
								
20-in.	1981	10,742	153,689	65,579	12,012	242,022	219,351	402,490
	1980	5,544	145,901	106,355	26,726	284,526	240,776	333,957
	1979	.....	.....	.....	.....	.....	.....	.....
	1978	3,235	101,052	83,810	12,346	200,443	153,959	242,685
	1977	5,415	95,045	85,842	16,044	202,346	110,349	312,337
	1976	.....	.....	.....	.....	.....	.....	.....
	1975	7,258	53,951	37,251	18,134	116,593	101,674	155,982
	1974	6,356	49,152	98,168	14,712	163,388	118,231	219,835
	1973	3,600	36,100	48,150	4,100	91,950	88,170	100,550
	1972	8,300	42,570	36,230	10,230	97,390	96,450	99,640
								
								
24-in.	1981	13,690	165,746	148,577	78,734	406,747	352,089	838,986
	1980	10,052	166,119	122,060	28,046	326,277	196,409	678,322
	1979	5,268	152,878	193,227	19,206	370,579	(†)	(†)
	1978	2,372	112,790	125,435	17,045	257,642	239,480	371,932
	1977	.....	.....	.....	.....	.....	.....	.....
	1976	4,784	95,656	94,319	29,755	224,514	(†)	(†)
	1975	4,306	75,126	38,115	18,189	135,736	130,939	139,833
	1974	3,944	53,295	29,764	13,047	100,794	89,495	148,841
	1973	1,450	53,550	37,450	10,050	102,500	(†)	(†)
	1972	9,200	55,320	70,780	18,810	141,110	127,270	256,930
								
								
30-in.	1981	16,719	314,636	178,733	72,965	583,053	373,900	933,961
	1980	7,224	300,949	130,864	62,858	501,895	393,000	862,685
	1979	25,884	239,454	290,474	35,752	591,560	529,178	604,298
	1978	12,231	187,718	216,264	20,895	437,108	(†)	(†)
	1977	6,485	147,814	91,862	22,469	268,630	266,513	270,684
	1976	22,456	112,497	96,141	19,750	250,844	168,029	471,679
	1975	17,267	92,819	123,824	19,981	261,730	179,445	414,866
	1974	9,766	98,123	64,677	21,706	194,289	120,270	281,075
	1973	11,240	101,380	93,650	19,350	225,600	166,490	522,000
	1972	1,350	91,130	59,930	11,620	164,030	135,700	200,015
								
								
36-in.	1981	26,376	535,737	452,281	130,503	1,144,937	710,000	1,430,950
	1980	30,928	423,687	298,684	163,546	916,845	687,144	1,221,463
	1979	20,654	272,397	203,639	57,814	554,504	443,024	682,280
	1978	26,441	199,878	150,667	65,439	442,425	(†)	(†)
	1977	20,101	209,878	115,498	18,366	363,843	(†)	(†)
	1976	.....	.....	.....	.....	.....	.....	.....
	1975	12,567	118,579	94,095	10,929	236,170	194,960	355,962
	1974	7,350	121,715	79,025	24,551	232,641	204,841	288,668
	1973	9,400	116,400	79,700	9,700	215,250	192,000	245,870
	1972	5,360	114,965	140,000	15,840	276,165	189,215	476,665
								
								

*1972-1978 based on completed costs reported to FERC by fiscal year; 1979 by calendar year. 1980-81 based on FERC Construction Permit Applications, by fiscal year. †One report only.

Current pipeline costs

									\$
Size, in.	Location	Miles	Material	Labor	Misc.	R.O.W. & damages	Total	\$/mile	
ONSHORE PIPELINES									
4	Louisiana	3.63	130,000	1,080,000	8,000	32,000	1,250,000	344,353	
6	Colorado	26.70	888,700	1,875,000	493,300	240,000	3,497,000	130,974	
8	W. Virginia	9.55	439,400	798,200	138,459	74,500	1,450,559	151,890	
10	Delaware	13.19	713,245	461,159	138,392	7,787	1,320,583	100,120	
10	Colorado	24.00	1,180,000	884,000	174,000	65,000	2,303,000	95,958	
10	Colorado	42.00	2,122,000	1,324,000	289,000	110,000	3,845,000	91,548	
12	Wyoming/Utah	12.20	834,000	484,000	234,297	39,000	1,591,297	130,434	
20	New York	3.90	859,350	646,900	52,200	11,260	1,569,710	402,490	
20	Wyoming	4.08	537,600	330,000	331,721	19,000	1,218,321	298,600	
20	Oklahoma*	48.10	6,937,800	2,765,000	192,700	692,600	10,588,100	220,127	
20	Oklahoma*	66.30	9,900,000	3,200,000	736,000	707,000	14,543,000	219,351	
20	Oklahoma	73.00	11,793,000	5,871,000	1,034,000	669,000	19,367,000	265,301	
22	Wyoming	10.10	2,205,000	2,173,000	359,900	80,400	4,818,300	477,059	
24	Minnesota	12.00	2,319,000	1,916,000	1,117,580	58,000	5,410,580	450,882	
24	Texas	13.00	2,996,078	2,298,420	1,305,822	249,680	6,850,000	526,923	
24	W. Virginia/Ohio	20.27	3,544,500	4,410,100	591,000	216,900	8,762,500	432,289	
24	Louisiana*	26.83	5,715,081	12,041,832	3,894,587	858,500	22,510,000	838,986	
24	Pennsylvania*	61.00	14,003,000	13,023,400	3,074,400	1,000,800	31,101,600	509,862	
24	Colorado/Kansas	375.00	55,637,700	41,802,100	30,021,490	4,572,000	132,033,290	352,089	
26	Wyoming*	11.00	2,521,000	764,000	44,000	158,400	3,487,400	317,036	
26	Wyoming*	39.00	8,938,200	2,708,700	156,200	561,600	12,364,700	317,044	
30	Louisiana	12.50	5,333,000	2,987,600	916,400	500,000	9,737,000	778,960	
30	Louisiana*	15.30	3,036,309	3,687,761	1,623,260	419,640	8,766,970	573,005	
30	Massachusetts*	15.40	5,957,400	6,040,100	1,892,500	493,000	14,383,000	933,961	
30	New York*	21.10	7,146,600	7,591,500	2,332,900	439,000	17,510,000	829,858	
30	Iowa/Minn.	26.30	8,229,200	6,178,300	2,379,260	176,800	16,963,560	645,002	
30	Pennsylvania*	27.00	10,253,300	10,520,900	3,224,800	432,000	24,431,000	904,852	
30	Wyoming*	32.50	8,375,800	3,499,500	132,900	143,700	12,151,900	373,905	
30	Wyoming*	39.00	10,050,800	4,199,400	159,400	172,500	14,582,100	373,900	
30	Wyoming*	53.60	14,431,700	6,585,500	214,500	1,149,200	22,380,900	417,554	
30	Wyoming*	77.00	22,077,900	8,121,800	308,200	1,108,800	31,616,700	410,606	
30	Texas	115.00	41,880,453	18,283,000	18,533,923	2,233,000	80,930,376	703,742	
36	W. Virginia*	12.20	4,228,500	3,769,000	609,500	55,000	8,662,000	710,000	
36	Louisiana*	25.80	16,473,242	12,797,540	6,987,239	660,480	36,918,501	1,430,950	
36	Louisiana	35.00	18,410,000	16,450,000	1,930,000	1,310,000	38,000,000	1,085,714	
42	New York*	48.60	41,339,800	26,322,800	10,189,400	3,888,000	81,740,000	1,681,893	
*Loop									
OFFSHORE PIPELINES									
6	Texas	1.40	164,800	1,676,500	221,700	4,000	2,067,000	1,476,429	
6	Texas	4.26	416,228	1,471,255	488,477	1,240	2,377,200	558,028	
8	Louisiana	1.40	194,500	1,154,900	118,600	2,000	1,470,000	1,050,000	
8	Texas	10.20	1,033,400	2,593,700	1,584,900	30,000	5,242,000	519,010	
10	Texas	1.60	375,600	3,126,720	955,910	—	4,458,230	2,786,394	
10	Texas	3.50	440,140	2,826,460	1,369,810	—	4,336,410	1,238,974	
10	Texas	4.40	506,100	2,995,160	1,035,460	—	4,536,720	1,031,073	
10	Louisiana	5.16	768,328	2,994,020	816,002	1,250	4,579,500	887,519	
10	Texas	5.30	954,600	2,108,260	662,140	1,000	3,726,000	703,019	
10	Louisiana	9.71	1,521,800	2,432,000	303,500	500	4,257,800	438,496	
12	Texas	2.61	620,276	2,115,556	651,328	1,240	3,388,400	1,298,238	
12	Texas	3.50	934,400	2,534,300	769,850	1,250	4,244,800	1,212,800	
12	Louisiana	5.36	1,256,000	2,893,000	617,000	—	4,820,000	899,253	
12	Louisiana	9.90	1,488,200	2,761,800	410,000	2,000	4,662,000	470,909	
12	Texas	13.50	1,812,400	5,664,600	857,000	2,000	8,336,000	617,481	
16	Louisiana	3.20	650,000	1,350,000	400,000	—	2,400,000	750,000	
16	Texas	3.33	1,162,050	3,413,250	1,058,350	1,250	5,634,000	1,691,892	
16	Louisiana	5.60	1,469,000	3,282,000	2,052,000	2,000	6,805,000	1,215,179	
16	Louisiana	7.60	2,300,200	3,514,000	698,800	1,000	6,514,000	857,105	
16	Louisiana	25.70	6,000,120	18,972,560	4,061,070	82,050	29,115,800	1,132,910	
18	Louisiana	12.27	2,527,530	5,788,160	1,344,420	276,580	9,936,690	809,638	
20	Texas	7.50	2,422,108	3,537,000	2,017,892	—	7,977,000	1,063,600	
20	Louisiana	7.80	2,689,000	8,726,800	3,794,200	2,000	15,212,000	2,028,267	
20	Louisiana	18.40	3,333,000	5,151,000	957,000	1,000	9,442,000	513,152	
24	Texas	3.80	2,229,200	3,604,200	707,600	2,000	6,453,000	1,721,842	
24	Texas	7.81	4,368,200	5,589,700	2,241,100	1,000	12,200,000	1,562,100	
24	Texas	12.91	5,253,616	8,523,150	2,856,034	1,300	16,634,100	1,288,466	
24	Texas	16.70	4,567,290	10,882,340	1,901,590	37,410	17,288,630	1,035,247	
30	Texas	21.60	13,055,000	12,125,500	2,606,500	2,000	27,789,000	1,286,528	
30	Louisiana*	39.00	16,411,960	14,762,010	6,731,170	125,720	38,030,860	975,150	
36	Louisiana	82.00	59,562,000	46,626,000	5,506,000	157,000	111,851,000	1,364,037	

Source: FERC Construction Permit applications; 6/80-5/81. *Loop

421

Table 4

Current compressor station costs

Location	Horsepower	Equipment & material	Labor	\$		Total	\$ /hp
				Land	Misc.		
ONSHORE							
Pennsylvania	720	533,000	197,500	25,000	81,800	837,300	1,163
Texas*	745	664,500	274,500	—	137,800	1,076,800	1,445
Pennsylvania*	1,160	584,000	190,000	—	113,000	887,000	765
Texas*	2,250	926,000	360,000	—	295,000	1,581,000	703
Oklahoma	2,500	2,415,000	949,000	40,000	588,456	3,992,456	1,597
Colorado	3,000	3,330,000	944,000	—	500,000	4,774,000	1,591
Wyoming	3,000	3,844,700	845,700	—	1,796,400	6,486,800	2,162
Pennsylvania	3,165	1,583,000	965,000	20,000	426,000	2,994,000	946
Ohio	3,200	1,675,000	785,000	—	174,600	2,634,000	823
Colorado	3,500	2,898,000	1,132,000	335,000	1,785,630	6,150,630	1,757
Nebraska	4,000	3,698,000	864,600	18,000	167,000	4,747,000	1,187
Texas	4,000	1,869,600	539,900	5,300	324,200	2,739,000	685
Oklahoma	4,000	3,065,000	1,118,000	40,000	661,342	4,884,342	1,221
Oklahoma	5,000	5,295,000	1,069,200	20,000	160,700	6,544,900	1,309
New York	6,000	3,033,000	1,380,000	309,000	783,000	5,505,000	918
New Mexico	8,000	4,025,800	1,365,100	28,500	1,241,800	6,661,200	833
Colorado	8,000	6,781,000	1,697,000	150,000	633,000	9,261,000	1,158
New York	9,000	4,988,000	2,186,000	50,000	1,199,000	8,423,000	936
Colorado	11,000	10,262,000	2,791,000	317,000	1,036,000	14,406,000	1,310
Oklahoma	12,000	9,500,000	2,100,000	—	780,000	12,380,000	1,032
Louisiana	13,800	10,872,000	6,643,000	281,000	3,704,000	21,500,000	1,558
Louisiana	16,000	12,780,600	2,688,000	24,400	4,312,950	19,805,950	1,238
Pennsylvania	20,000	7,903,000	2,541,600	79,300	2,286,527	12,810,427	640
*Addition.							
OFFSHORE							
Louisiana	1,300	921,400	655,000	—	80,000	1,656,400	1,274
Louisiana	2,200	1,050,000	655,000	—	100,000	1,805,000	820
Louisiana	2,200	3,065,000	1,997,000	—	506,000	5,568,000	2,531
Louisiana	2,700	1,580,000	1,620,000	—	903,600	4,103,600	1,520

Source: FERC Construction Permit Applications, 6/80-5/81.

MAJOR COMPANY REPORTS

Capital and exploration expenditures

(U.S. \$ Million)	1973	1974	1975	1976	1977	1978	1979	1980
Capital and Exploration Expenditures								
Amerada Hess	242	423	283	291	422	353	659	985
Ashland	176	283	216	252	501	317	292	NA
Atlantic Richfield	500	1,751	1,751	1,826	1,681	1,358	1,823	NA
British Petroleum	930	946	1,751	2,167	1,765	2,409	2,766	2,416
C.F.P. (Total Group)*	600	1,000	826	1,249	899	739	697	1,459
Cities Service	402	439	439	524	501	637	758	1,087
Conoco	477	681	844	797	853	1,113	1,586	1,768
E.N.I.	874	1,015	1,169	1,481	1,346	1,478	1,922	2,510
Exxon	2,235	4,520	3,654	5,100	4,600	5,300	7,400	8,000
Getty	437	520	513	618	684	865	1,239	1,345
Gulf	979	1,564	1,546	1,742	3,013	2,129	2,513	2,968
Kerr-McGee	113	228	235	333	269	270	389	575
Marathon	169	273	273	1,067	557	590	790	947
Mobil	1,334	1,652	1,469	2,485	1,786	2,175	3,812	4,649
Murphy	118	215	215	175	263	285	317	382
Occidental	109	267	321	370	390	510	566	NA
Pennzoil	251	236	217	247	264	344	369	524
Phillips	329	587	679	716	1,078	940	1,454	1,666
Shell Group	1,357	2,071	3,113	4,188	5,227	5,252	9,034	NA
Std. Calif.	1,217	2,271	2,360	1,705	1,429	1,692	2,258	3,599
Std. Indiana	1,100	1,876	2,114	1,774	1,874	2,240	3,028	4,326
Std. Ohio	193	700	1,642	1,700	1,087	762	602	1,007
Sun	284	537	657	616	667	717	852	3,800
Tenneco	402	663	550	620	714	1,008	1,477	1,825
Texaco	1,334	1,674	1,864	1,583	1,564	1,581	1,642	3,077
Union	391	686	680	798	813	782	1,088	1,700

*Converted to U.S. dollars using exchange rate in effect December 31, 1979.
Source: Annual reports

Gas production

	1973	1974	1975	(MMcfd) 1976	1977	1978	1979	1980
Amerada Hess	743	707	653	591	625	591	638	638
Ashland†	305	287	311	313	215	233	153	NA
Atlantic Richfield*	2,138	1,976	1,819	1,748	1,642	1,517	1,486	1,388
British Petroleum*	407	335	300	350	358	385	332	309
C.F.P. (Total Group)*	14	17	33	51	117	293	470	536
Cities Service	1,127	1,149	1,084	1,042	958	945	907	849
Conoco	1,522	1,617	1,551	1,606	1,579	1,504	1,472	1,364
ENI	1,413	1,412	1,255	1,401	1,268	1,330	1,328	1,376
Exxon*	9,767	9,842	10,645	10,678	10,488	10,368	10,181	9,400
Getty	1,261	1,190	1,118	993	892	797	883	878
Gulf	3,360	3,028	2,433	2,035	2,167	2,153	2,176	2,032
Kerr-McGee*	296	285	244	247	222	230	244	236
Marathon	419	413	385	440	463	425	447	562
Mobil	3,682	3,581	3,311	3,146	3,240	3,270	3,649	3,599
Murphy	NA	NA	90	92	85	110	146	166
Occidental	66	55	49	49	48	57	70	82
Pennzoil	675	748	547	501	509	587	622	621
Phillips	1,603	1,570	1,455	1,380	1,343	1,549	1,558	1,497
Shell Group*	6,351	6,787	6,621	6,714	6,674	6,439	6,516	NA
Std. Calif.	1,985	1,883	1,800	1,789	1,778	1,712	1,732	1,739
Std. Indiana	3,935	3,635	3,388	3,272	3,286	3,263	3,328	3,057
Std. Ohio*	110	110	90	79	86	83	81	80
Sun	1,523	1,421	1,392	1,330	1,271	1,171	1,200	1,157
Tenneco	972	1,040	1,200	1,149	1,107	1,108	1,157	1,139
Texaco*	4,516	4,343	4,035	3,927	3,883	3,894	3,646	3,103
Union	1,534	1,540	1,442	1,391	1,290	1,255	1,266	1,226

*Sales. †Year ended Sept. 30.
Source: Annual reports.

Net production of crude oil and NGL

	1973	1974	1975	(Thousands of b/d)		1978	1979	1980
				1976	1977			
Amerada Hess	215	157	156	169	178	177	191	190
Ashland	51	55	58	65	37	37	25	NA
Atlantic Richfield	656	596	594	511	563	643	568	589
British Petroleum*	4,780	4,440	3,440	3,540	3,390	3,720	3,260	NA
C.F.P. (Total Group)*	1,620	1,772	1,454	1,510	1,430	1,437	1,409	1,268
Cities Service	249	243	231	225	214	208	204	187
Conoco	586	460	436	461	464	469	482	458
ENI	374	337	290	316	309	356	367	333
Exxon	†6,718	†6,367	4,959	5,325	5,091	4,691	4,444	4,011
Getty	420	418	409	398	431	444	425	416
Gulf	3,140	1,815	2,040	1,801	1,687	1,591	1,733	1,178
Kerr-McGee	38	37	35	38	38	35	33	33
Marathon	441	377	265	290	311	299	304	290
Mobil	†2,522	2,357	2,144	2,063	2,278	2,024	2,180	1,984
Murphy	52	52	48	46	52	52	52	62
Occidental	NA	174	150	173	254	326	351	296
Pennzoil	47	54	45	43	42	45	42	37
Phillips	338	338	365	384	403	444	436	452
Shell Group	6,729	5,917	4,786	4,732	4,847	4,714	4,555	NA
Std. Calif.†	3,170	3,815	3,025	3,542	3,403	3,289	3,199	3,009
Std. Indiana	875	874	945	932	1,004	1,032	849	836
Std. Ohio	51	52	50	42	183	535	611	716
Sun	369	384	363	294	284	275	237	235
Tenneco	81	79	82	89	93	94	99	95
Texaco	4,286	4,307	3,591	3,860	3,786	3,410	3,475	†3,316
Union	380	364	357	349	335	312	265	251

*Crude only. †Gross.

Source: Annual reports.

Crude runs to stills

(Thousands b/d)	1973	1974	1975	1976	1977	1978	1979	1980
Amerada Hess	492	530	519	551	596	585	560	481
Ashland	338	330	331	348	358	353	368	NA
Atlantic Richfield	746	700	722	723	775	815	823	727
British Petroleum	2,340	2,100	1,720	1,900	1,860	2,000	2,290	NA
C.F.P. (Total Group)	1,108	1,141	970	1,028	1,010	1,051	1,079	1,224
Cities Service	235	232	250	250	252	256	260	238
Conoco	548	501	465	464	457	455	494	402
ENI	554	701	624	794	736	785	887	849
Exxon	5,761	5,183	4,331	4,359	4,348	4,427	4,354	4,150
Getty	239	250	256	282	280	281	275	269
Gulf	1,742	1,951	1,701	1,697	1,766	1,766	1,753	1,384
Kerr-McGee	39	129	153	165	165	145	123	113
Marathon	313	320	339	390	537	564	541	471
Mobil	2,365	2,114	2,060	2,049	2,075	2,064	2,063	1,978
Murphy	94	92	91	91	94	106	111	91
Pennzoil	36	48	51	53	56	49	56	53
Phillips	397	374	370	318	297	302	287	262
Shell Group	5,554	4,873	4,258	4,191	4,286	4,242	4,221	NA
Std. Calif.	2,248	2,134	2,105	2,257	2,301	2,205	2,234	2,186
Std. Indiana	1,100	1,070	1,104	1,176	1,212	1,286	1,200	1,042
Std. Ohio	382	323	364	405	423	421	429	401
Sun	580	570	596	605	609	622	608	518
Tenneco	77	80	84	85	91	88	92	91
Texaco	3,052	3,060	2,772	2,860	2,870	2,788	2,857	2,533
Union	472	421	439	425	437	419	429	381

Source: Annual reports.

Refined product sales

(Thousands b/d)	1973	1974	1975	1976	1977	1978	1979	1980
Amerada Hess	615	591	523	580	648	642	623	550
Ashland	474	436	441	478	517	509	531	NA
Atlantic Richfield	896	802	761	812	829	831	860	788
British Petroleum	2,200	1,960	1,760	1,920	1,940	2,380	2,620	2,390
C.F.P. (Total Group)	1,193	1,195	1,131	1,186	1,183	1,259	1,292	1,224
Cities Service	276	265	278	290	298	308	292	276
Conoco	654	611	594	592	601	642	622	546
ENI	515	779	705	790	751	795	930	892
Exxon	6,178	5,505	4,990	5,353	5,266	5,390	5,319	4,936
Getty	273	280	280	285	306	303	305	351
Gulf	1,781	1,673	1,610	1,609	1,669	1,683	1,684	1,346
Kerr-McGee	112	217	229	217	220	206	171	158
Marathon	349	349	370	441	567	612	624	523
Mobil	2,482	2,227	2,211	2,264	2,299	2,374	2,362	2,259
Murphy	154	145	138	141	138	142	131	109
Pennzoil	35	46	69	67	62	65	66	56
Phillips	637	601	611	577	532	516	508	509
Shell Group	5,819	5,052	4,620	4,652	4,691	4,900	4,712	NA
Std. Calif.	2,259	2,184	2,116	2,339	2,455	2,456	2,479	2,374
Std. Indiana	1,234	1,181	1,166	1,245	1,294	1,371	1,316	1,168
Std. Ohio	385	333	351	403	407	427	430	414
Sun	647	658	687	728	678	685	678	618
Tenneco	125	144	157	153	154	152	137	126
Texaco	3,472	3,446	3,241	3,277	3,227	3,236	3,138	2,824
Union	487	456	434	453	439	458	463	422

Source: Annual reports.

Net income, gross operating revenue

(U.S. \$ million)	1975		1976		1977		1978		1979		1980	
	Net	Gross	Net	Gross	Net	Gross	Net	Gross	Net	Gross	Net	Gross
	Income	op. rev.	Income	op. rev.	Income	op. rev.	Income	op. rev.	Income	op. rev.	Income	op. rev.
Amerada Hess	131	3,180	161	3,914	182	4,591	139	4,701	507	6,770	540	7,956
Ashland	114	3,924	141	4,407	164	5,051	148	5,426	176	6,740	197	8,520
Atlantic Richfield	350	7,747	575	8,918	702	11,413	804	12,739	1,166	16,677	1,536	24,156
C.F.P. (Total Group)†	174	9,456	51	11,439	63	12,901	109	13,595	1,509	17,765	1,223	24,260
British Petroleum†	415	21,170	750	28,543	795	33,031	987	38,983	3,598	50,407	3,430	60,579
Cities Service	138	3,201	217	3,964	210	4,388	118	4,661	348	6,277	478	7,786
Conoco	326	7,666	456	8,352	381	9,052	451	9,872	815	13,083	1,026	18,766
ENI†	(182)	8,390	(105)	12,591	(389)	14,518	(439)	16,672	52	22,890	51	27,675
Exxon	2,456	48,764	2,615	52,592	2,443	58,460	2,763	64,886	4,295	84,809	5,660	110,469
Getty	261	3,174	266	3,275	321	3,544	330	3,758	604	5,121	872	10,437
Gulf	700	15,838	816	18,117	752	19,595	791	19,892	1,322	23,266	1,307	28,790
Kerr-McGee	131	1,799	134	1,955	119	2,165	118	2,072	160	2,683	182	3,478
Marathon	128	3,161	195	3,828	197	4,657	225	4,955	323	7,200	379	8,754
Mobil	810	20,620	942	28,046	1,026	34,443	1,131	36,684	2,007	47,485	2,819	63,652
Murphy	40	951	49	1,020	47	1,148	47	1,218	104	1,596	151	2,017
Occidental	176	5,397	130	5,609	154	6,080	7	6,316	562	9,638	711	12,476
Pennzoil	88	104	112	1,195	100	1,280	128	1,553	239	2,052	309	2,483
Phillips	335	5,134	416	5,698	531	6,284	718	6,998	891	9,503	1,070	13,377
Shell	1,991	33,873	2,683	46,623	3,071	53,438	2,422	53,777	6,804	66,111	NA	NA
Std. Calif.	781	18,172	877	20,563	992	22,238	1,089	24,597	1,785	31,755	2,401	42,900
Std. Indiana	799	11,147	891	12,690	1,032	14,263	1,076	16,350	1,507	20,197	1,915	27,831
Std. Ohio	127	2,507	136	2,916	181	3,523	450	5,198	1,186	7,916	1,811	11,023
Sun	242	4,465	381	5,431	412	6,437	415	7,494	700	10,666	785	13,200
Tenneco	334	5,891	361	6,638	417	7,480	452	8,877	571	11,338	726	13,226
Texaco	823	25,096	810	26,932	890	28,444	853	29,124	1,759	39,096	2,240	52,486
Texas Eastern	99	1,298	107	1,547	124	2,016	137	2,028	181	2,944	NA	NA
Union	237	5,086	286	5,731	334	6,099	382	6,490	501	8,082	647	10,437
Union Pacific (Champlin)	149	1,755	188	2,065	222	2,554	264	2,989	382	4,029	NA	NA

*Excludes nonrecurring gains & losses when their effect can be determined.

†Converted to U.S. dollars using exchange rate in effect December 31, 1979.

Source: Annual reports

WORLDWIDE GAS PROCESSING

Capacities as of January 1, 1981, and average production

State	No. plants	MMcfd		Production—1,000 gal/day (Averaged based on the past 12 months)								Total products
		Gas capacity	Gas throughput	Ethane	Prop.	Isobut.	Normal or unsplit butane	LP-gas mix	Raw NGL mix	Debut. nat. gaso.	Other	
Alabama	5	182.0	134.1	.....	177.9	.....	141.7	.....	.....	53.2	883.3	1,256.1
Alaska	2	49.4	40.3	.....	7.2	.....	.....	.....	48.2	.....	.....	55.4
Arkansas	4	152.0	78.3	.....	16.9	4.1	11.7	.....	60.3	11.4	1.9	106.3
California	38	1,260.5	403.0	.....	245.6	15.5	49.7	9.3	265.2	133.9	.....	719.2
Colorado	27	797.6	527.0	0.5	144.9	0.4	71.3	6.3	882.9	63.1	29.0	1,198.4
Florida	3	907.7	781.0	463.5	384.3	.....	234.7	.....	44.3	111.7	.....	1,238.5
Illinois	2	551.5	411.0	490.0	395.7	35.0	76.7	.....	4.8	29.7	.....	1,031.9
Indiana	1	5.6	0.8	.....	3.3	.....	.....	.....	.....	6.6	.....	9.9
Kansas	23	4,988.5	3,480.6	437.4	942.7	103.6	395.6	.....	1,056.7	245.5	24.5	3,206.0
Kentucky	2	951.0	660.2	.....	.....	.....	.....	.....	.....	.....	550.6	550.6
Louisiana	102	23,688.3	14,410.6	1,929.0	1,905.5	544.8	688.0	418.8	5,757.9	1,145.6	1,044.2	13,433.8
Michigan	8	715.0	457.7	.....	128.1	0.5	3.5	.....	1,107.5	28.6	210.4	1,478.6
Mississippi	7	1,002.0	515.7	.....	9.3	.....	8.9	3.1	46.3	8.2	4.0	79.8
Montana	8	60.9	36.3	.....	32.3	.....	10.6	.....	54.8	.....	0.4	98.1
Nebraska	2	22.5	4.0	.....	5.4	.....	2.0	.....	2.5	2.1	.....	12.0
New Mexico	36	3,587.9	2,742.0	139.6	356.9	21.0	112.7	13.5	3,392.4	72.2	245.7	4,354.0
North Dakota	8	452.2	239.0	.....	131.1	.....	53.2	9.7	52.5	39.5	8.6	294.6
Oklahoma	93	4,462.4	2,984.8	156.2	677.7	97.4	231.2	372.0	3,120.0	266.6	736.0	5,657.1
Texas	384	24,856.8	14,462.9	3,005.4	4,111.2	493.3	2,116.0	1,050.6	10,830.8	2,214.4	2,467.3	26,289.0
Utah	11	598.5	308.5	.....	141.7	13.0	89.8	10.9	72.7	91.0	.....	419.1
West Virginia	4	368.0	244.2	210.0	133.0	22.0	40.0	.....	293.0	33.0	.....	731.0
Wyoming	39	1,378.4	758.1	.....	360.1	32.5	165.8	81.2	184.9	145.7	2.8	973.0
Total	809	71,038.7	43,680.1	6,831.6	10,310.8	1,383.1	4,503.1	1,975.4	27,277.7	4,702.0	6,208.7	63,192.4

Country	No. plants	MMcfd		Production—1,000 gal/day (Averaged based on the past 12 months)								Total products
		Gas capacity	Gas throughput	Ethane	Prop.	Isobut.	Normal or unsplit butane	LP-gas mix	Raw NGL mix	Debut. nat. gaso.	Other	
Abu Dhabi	1	450.0	270.0	.....	302.6	.....	213.4	.....	.....	90.4	.....	606.4
Algeria	4	5,335.2	4,268.2	.....	.....	.....	.....	632.8	.....	.....	5,449.2	6,082.0
Argentina	5	935.9	322.4	.....	96.1	5.4	90.1	.....	.....	50.8	.....	242.4
Australia	1	810.0	453.0	399.0	427.0	.....	254.0	.....	.....	.....	645.0	1,725.0
Austria	2	5.7	4.7	.....	.....	.....	.....	.....	0.9	.....	.....	0.9
Bahrain	1	110.0	108.0	.....	118.4	.....	91.9	.....	.....	123.8	.....	334.1
Bolivia	2	474.0	380.0	.....	.....	.....	.....	.....	32.6	.....	.....	32.6
Brazil	3	202.5	185.0	.....	.....	.....	.....	145.0	237.5	29.0	.....	411.5
Canada												
Alberta	280	16,306.4	11,273.4	3,110.5	2,365.0	292.6	1,567.0	830.1	3,592.4	3,624.2	984.6	16,366.4
British Columbia	8	2,058.4	1,509.5	.....	58.2	68.7	59.0	.....	.....	107.7	.....	293.6
Northwest Territories	2	192.0	41.5	.....	.....	.....	.....	.....	.....	1.2	.....	1.2
Saskatchewan	9	139.5	58.6	63.0	45.6	5.0	16.9	.....	0.5	.....	10.0	141.0
Chile	2	510.0	410.0	.....	188.5	.....	123.9	.....	.....	106.5	.....	418.9
China Republic (Taiwan)	4	271.0	185.8	106.2	51.7	1.1	32.6	.....	30.3	29.8	.....	251.7
Dominican Republic	1	.....	.....	.....	.....	.....	.....	.....	.....	.....	376.7	376.7
Ecuador	2	.....	.....	.....	.....	.....	.....	2.4	9.1	.....	.....	11.5
Egypt	4	553.0	263.5	.....	.....	.....	.....	87.6	.....	92.5	185.4	365.5
Germany	5	542.9	451.0	.....	.....	.....	.....	.....	.....	.....	.....	.....
Hungary	10	758.1	507.6	.....	167.2	9.7	151.1	.....	31.9	242.7	245.7	848.3
Indonesia	2	360.0	231.0	.....	483.6	.....	437.6	.....	.....	.....	.....	921.2
Italy	10	4,431.0	2,693.0	.....	.....	.....	.....	120.0	.....	793.1	.....	913.1
Kuwait	1	1,680.0	848.0	.....	2,107.8	.....	1,251.7	.....	799.3	.....	.....	4,158.8
Libya	7	1,851.0	1,227.0	.....	.....	.....	.....	37.8	5,577.0	.....	551.0	6,165.8
Mexico	10	3,457.0	2,463.5	1,262.5	4,980.0	.....	.....	.....	.....	.....	.....	6,242.5
Netherlands	1	330.0	184.0	.....	.....	.....	.....	.....	.....	.....	6.0	6.0
New Zealand	1	96.0	58.0	.....	14.4	.....	0.6	.....	.....	4.3	.....	19.3
Pakistan	5	885.0	720.1	.....	.....	.....	.....	21.3	.....	7.8	3.1	32.2
Peru	2	84.0	41.7	.....	.....	.....	1.0	8.6	.....	37.0	3.9	50.5
Qatar	2	580.0	464.0	.....	1,240.0	.....	800.0	.....	.....	.....	604.0	2,644.0
Saudi Arabia	4	2,800.0	2,240.0	.....	.....	.....	.....	.....	1,304.0	.....	.....	1,304.0
United Kingdom	3	2,065.0	952.0	.....	.....	.....	.....	.....	.....	1,572.5	47.0	1,619.5
Venezuela	14	2,539.0	1,959.2	8.5	235.4	17.2	156.1	402.6	1,660.1	115.8	.....	2,595.7
Total	408	50,812.6	34,773.7	4,949.7	12,881.5	399.7	5,246.9	2,288.2	13,275.6	7,029.1	9,111.6	55,182.3

To arrive at more accurate totals, natural-gas throughput and liquids production are estimated at 80% capacity in those cases where only capacities are available. This explains apparent discrepancies in the addition of some columns. The letters NR mean no response. *Indicates cycling operations. The symbol < denotes less than 100 gal/day.

Products listed in the last column are identified by numbers: 1—iso-pentane, 2—upgraded motor fuel, 3—diesel, 4—kerosene, 5—ethane-propane mix, 6—solvent naphtha, 7—jet fuel, 8—normal pentane, 9—residuum, bottoms, 10—distillate, fuel oil, 11—condensate, 12—gas oil.

The process methods in the third column are identified by the following numbers: 1—absorption, 2—refrigerated absorption, 3—refrigeration, 4—compression, 5—adsorption, 6—cryogenic—Joule-Thomson, 7—cryogenic-expander.

Figures in parenthesis do not represent primary production, and are not added in state totals.

Since this compilation includes cycling plants reprocessing pipeline gas, totals shown here for gas throughput do not relate directly to government data on total gas processed, or sold. Similarly, liquids production figures are based on yearly average and do not necessarily reconcile with government data.

Company, plant, location	MMcfd		Process method	Production—1,000 gal/day (Average based on the past 12 months)							
	Gas capacity	Gas throughput		Ethane	Prop.	Isobut.	Normal or unsplit butane	LP-gas mix	Raw NGL mix	Debut. nat. gaso.	Other
ALABAMA											
Exxon Co. USA—Big Escambia Creek, Escambia Co., 4-1n-7e	40.0	32.0	7		52.5		45.0			30.0	
Getty Oil Co.—Hatter's Pond, Mobile Co., 10-2s-1w	50.0	34.0	3		36.8		27.4			7.4	¹¹ 337.3
Phillips Petroleum Co.—Chatom, Washington Co., ne4-29-6n-4w	31.0	24.8	3								
Placid Oil Co.—Womack, Choctaw, Co., 9-10n-2w	4.0	3.3	3		8.6		9.3			5.8	
Union Oil Co. of California—Churchula, Mobil Co., 22-1s-2w	57.0	40.0	3		80.0		60.0			10.0	¹¹ 546.0
Total	182.0	134.1			177.9		141.7			53.2	883.3
ALASKA											
Chevron USA Inc.—*Swanson River LTS, Kenai Borough, 4-7n-9w	17.4	17.4	3		7.2						
Marathon Oil Co.—Trading Bay, Kenai Borough, 5-18n-15wsm	32.0	22.9	7						48.2		
Total	49.4	40.3			7.2				48.2		
ARKANSAS											
Amoco Production Co.—*Chalybeat Springs, Columbia Co., 34-19s-19w	20.0	20.0	3						25.3		
Arkansas Louisiana Gas Co.—Hamilton, Columbia Co., se9-18e-21w	75.0	10.4	3		12.4	4.1	5.9			6.2	¹⁰ 1.9
Cal Gas Corp.—*Walker Creek, Columbia Co., 23-19-23w	32.0	24.0	2						35.0		
Cities Service Co.—Walker Creek, Columbia Co., 23-19s-23w	25.0	23.9	2		4.5		5.8			5.2	
Total	152.0	78.3			16.9	4.1	11.7		60.3	11.4	1.9
CALIFORNIA											
Aminol USA Inc.—Huntington Beach, Orange Co.	15.0	4.5	3		1.0				9.0		
Inglewood, Los Angeles Co.	25.0	3.3	2		5.5				5.4		
Maricopa, Kern Co.	2.5	1.5	4						0.3		
Arco Oil & Gas Co.—No. Coles Levee No. 8, Kern Co., 32-30S-25e MDB&M	190.0	24.7	2		23.4		14.6			8.7	
Ojai Timber No. 18, Ventura Co. Rancho Ojai 36	3.0	6.9	3						2.0		
Stevens-Calidon, Kern Co., 20-31S-23e	18.0	2.2	3							4.0	
Chevron USA Inc.—Carpinteria, Santa Barbara Co., 33-4n-25w	23.0	6.6	3		2.4				2.0		
Gaviota, Santa Barbara Co., 35-5n-32w	30.0	0.2	3						0.1		
Huntington Beach, Orange Co., 3-6s-11w	3.5	2.2	3						4.6		
Inglewood LTS, Los Angeles Co., 8-25-14w	45.0	9.7	3						17.0		
Lost Hills, Kern Co., 4-27s-21e	10.0	5.8	3						3.2		
McKittrick Seventeen-Z, Kern Co., 17-30s-22e	90.0	41.1	2		44.4				42.6		
Murphy-Coyote, Orange Co., 18-3s-10w	5.0	1.4	3						4.0		
Taft One-C, Kern Co., 1-32s-23e	45.0	16.2	1		18.5				37.9		
Thirty-two Z, Kern Co., 32-30s-29e	7.0	0.6	3						0.7		
Three-P, Kings Co., 3-22s-17e	110.0	15.0	2		11.5	2.2	2.3			17.4	
Torrance, Los Angeles Co., 24-4s-14w	3.0	0.9	3						1.4		
Getty Oil Co.—Buena Vista Hills, Kern Co., 8-32s-24e MDB&M	20.0	7.6	1		5.4				8.9		
Cymric, Kern Co., 26-29-22e MDB&M	4.0	3.0	3		0.6				2.8		
*Reserve Standard, Kern Co., 17-11n-19w SBB&M	40.0	0.9	5						0.1		
Ventura Co., 27-3n-23w SBB&M	20.0	10.6	2		17.5	4.0	10.4		15.7		
Kernridge Oil Co.—Kern Co., 27s-20e-26	80.0	24.3	1		3.6	0.5				6.5	
Marathon Oil Co.—*South Coles Levee, Kern Co., 3-31s-25e	80.0	64.5	1		30.7	4.6	8.4			19.0	
Petrolane Lomita Gasoline Co.—Harbor, Los Angeles Co.	40.0	19.0	3							4.0	
Signal Hill, Los Angeles Co.	14.0	5.0	3		3.0				22.0		
Santa Fe Energy Co.—Rincon, Ventura Co., 17-3n-24w SBB&M	16.0	4.1	1					9.3 (3.6)		9.3 (1.3)	
Shell Oil Co.—Molino, Santa Barbara Co., 35-5n-31w	45.0	1.5	2		0.7					0.9	
Ventura Co., 28-3n-23w	13.0	6.5	3						6.9		
Sun Gas Co.—*Newhall, Los Angeles Co., 27-4n-17w	70.0	23.6	2		8.6		2.4			9.3	
Texaco Inc.1—Honor Rancho, Los Angeles Co., 36-5n-17w-SBBM	18.0	NR	4		12.0				32.0		
Shiells Canyon, Ventura Co., 4-4n-19w-SBBM	18.0	NR	2		15.0				35.0		
Union Oil Co. of California—Bell, Los Angeles Co., 6-35-11w	9.0	0.8	NR								
*Coalinga Nose, Fresno Co., 7-20s-16e	46.0	17.2	1		4.6	4.2	0.4			6.4	
Dominguez, Los Angeles Co., 33-3s-9w	20.0	3.5	1							9.5	
Santa Clara Valley, Ventura Co., 4n-18w	20.0	13.9	3		14.8					7.1	
Santa Maria, Santa Barbara, 24-10n-34w	35.0	12.7	1		14.4		11.2			11.2	
Stearns, Orange Co., 7-3s-9w	20.0	6.7	1		11.5					30.1	

Company, plant, location	MMcfd			Production—1,000 gal/day (Average based on the past 12 months)							
	Gas capacity	Gas throughput	Process method	Ethane	Prop.	Isobut.	Normal or unsplit butane	LP-gas mix	Raw NGL mix	Debut. nat. gaso.	Other
Warren Petroleum Co.—Yowlumne, Kern Co., 2-11n-22w	7.5	6.0	3	....	....	....	....	....	25.0	....	....
Total	1,260.5	403.0			245.6	15.5	49.7	9.3	265.2	133.9	

†All figures capacity. (Figures in parenthesis do not represent primary production, and are not added in state totals).

COLORADO

Amoco Production Co.—Peoria, Arapahoe Co., 33-4s-60w	10.0	7.9	7	.....	19.4	.....	.....	6.3	17.0	.....	10.9	.....
Spindle, Weld Co., 34-2n-67w	53.0	40.6	7	.....	.....	.....	.....	.....	275.2	.....	120.4	.....
Wattenberg, Adams Co., 31-3s-65w	150.0	111.0	7	.....	.....	.....	.....	.....	384.1	.....	.....	.....
Chevron USA Inc.—Rangely Hagoood, Rio Blanco Co., 23-2n-102w	10.0	5.8	3	.....	.....	.....	.....	.....	25.1	.....	.....	.....
Conoco Inc.—Fruita, Mesa Co., 34-9s-10w	20.0	13.0	5	.....	6.3	.....	4.9	.....	.....	2.5	.....	.....
Coors Energy Co.—Wattenberg, Weld Co., 25-1n-68w	8.0	2.2	3	.....	.....	.....	.....	.....	2.4	.....	.....	.....
Crystal Gas Resources Inc.—Roggen, Weld Co., se¼-sw¼-24-2n-63w	21.6	9.0	2	.....	.....	.....	.....	.....	32.4	.....	.....	.....
Vallery, Logan Co., 29-6n-54w	1.5	1.2	3	.....	.....	.....	.....	.....	2.9	.....	.....	.....
Ecological Engineering Systems Inc.—Brighton, Weld Co., se4-se4-28-1n-67w	1.5	1.2	3	.....	.....	.....	.....	.....	4.0	.....	.....	.....
Cabin Creek, Adams Co., sw4-4nw4-31-35n-59w-6pm	1.0	0.3	3	.....	.....	.....	.....	.....	2.0	.....	.....	.....
Lanson Farms, Weld Co., nw4-ne4-35-2n-68w-6pm	1.5	0.8	3	.....	.....	.....	.....	.....	4.0	.....	.....	.....
Excelsior Oil Corp.—Yenter, Logan Co., 2-08n-54w	10.0	4.0	2	.....	7.3	.....	.....	.....	7.3	.....	.....	.....
Gulf Energy & Development Corp.—Papoose Canyon, Delores Co., 1½ miles east of Dove Creek	5.0	3.1	3	.....	2.4	.....	.....	.....	3.5	.....	.....	.....
Industrial Gas Services Inc.—Centennial, Weld Co., nw4-nw4-9-6n-64w	10.0	0.5	3	.....	.....	.....	.....	.....	1.2	.....	.....	.....
Loveland Gas Processing CL—Loveland, Larimer Co.	2.0	1.0	3	.....	.....	.....	.....	.....	4.4	.....	.....	.....
Koch Industries Inc.—Third Creek, Adams Co., 18-25-65w	25.0	12.0	2	.....	.....	.....	.....	.....	50.9	.....	.....	.....
Matrix Land Co.—Piceance Creek, Rio Blanco Co., 15-25-96w	40.0	20.0	2	.....	7.0	.....	.....	.....	6.0	.....	.....	.....
Northwest Pipeline Corp.—Ignacio, La Plata Co., sw¼-36-34n-9w	300.0	235.2	1	.....	46.4	.....	60.0	.....	.....	54.4	.....	.....
Phillips Petroleum Co.—Weld Co., nw4-23-2n-63w	15.0	12.0	7	.....	.....	.....	.....	.....	.....	.....	.....	.....
Planet Engineers Inc.—McClave, Kiowa Co., sw4-32-20s-48w	7.5	3.4	2	.....	4.0	.....	.....	.....	3.4	.....	.....	.....
Sun Gas Co.—Denver Central, Arapahoe Co., 5-5s-62w	20.0	4.8	2	.....	15.6	.....	.....	.....	11.0	.....	10.8	.....
Dragon Trail, Rio Blanco Co., 35-2s-102w	22.5	10.0	2	.....	9.0	.....	4.2	.....	.....	5.0	.....	.....
Texaco Inc.—Wilson Creek, Rio Blanco Co., 27-3n-94w	10.5	NR	3	.....	22.3	.....	.....	.....	22.5	.....	.....	.....
Toa-American Gas Production Co.—Spindle, Weld Co.	18.0	NR	2	.....	6.9	.....	.....	.....	17.1	.....	6.9	.....
Trend Exploration Ltd.—Buck Peak, Moffat Co., se4-sw4-9-6n-90w	3.0	1.0	3	.....	0.6	.....	1.2	.....	.....	.....	.....	.....
Union Oil Co. of California—Adena, Morgan Co., 12-1n-58w	28.0	1.7	2	0.5	2.2	0.4	1.0	.....	.....	1.2	.....	.....
Vessels Gas Processing Ltd.—Brighton, Weld Co., 28-1n-67w	3.0	2.5	3	.....	.....	.....	.....	.....	11.0	.....	.....	.....
Total	797.6	527.0		0.5	144.9	0.4	71.3	6.3	882.9	63.1	29.0	

†All figures are capacity.

FLORIDA

Exxon Co. USA—Blackjack Creek, Santa Rosa, 23&4n-29w	9.0	10.0	6	28.4	23.8	.....	15.2	.....	.....	10.3	.....	.....
Jay, Santa Rosa Co., 9n43-5n through 29w	90.0	124.0	7	435.1	312.3	.....	173.8	.....	.....	101.4	.....	.....
Florida Hydrocarbons Co.—Brooker, Bradford Co.	NR	647.0	NR	.....	48.2	.....	45.7	.....	44.3	.....	.....	.....
Total	907.7	781.0		463.5	384.3		234.7		44.3	111.7		

ILLINOIS

Crystal Oil Co.—Keenville, Wayne Co., se¼-27-1s-5e	1.5	1.0	3	.....	.....	.....	.....	.....	4.8	.....	.....	.....
U.S. Industrial Chemicals Co., Division of National Distillers & Chemicals Corp.—Tuscola, Douglas Co., Ficklyn Township	550.0	410.0	2	490.0	395.7	35.0	76.7	.....	.....	29.7	.....	.....
Total	551.5	411.0		490.0	395.7	35.0	76.7		4.8	29.7		

INDIANA

Crystal Oil Co.—East Mt. Carmel, Gibson Co., sw¼-ne¼-36-1s-12w	5.6	0.8	3		3.3					6.6		
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KANSAS

Amoco Production Co.—Ulysses, Grant Co., 5-29s-38w	420.0	220.0	1		64.5	18.9	62.1			57.2		
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Company, plant, location	MMcfd			Production—1,000 gal/day (Average based on the past 12 months)							
	Gas capacity	Gas through-put	Process method	Ethane	Prop.	Isobut.	Normal or unsplit butane	LP-gas mix	Raw HGL mix	Debut. nat. gaso.	Other
Anadarko Production Co.—Cimarron,											
Seward Co., 26-33s-32w	15.0	21.0	2		10.0				11.0		
Interstate, Morton Co., 29-34s-43w	16.0	11.0	2		4.0				8.0		
Lone Star, Stevens Co., 18-33s-35w	4.0	3.0	3						2.5		
Woods, Seward, 22-33s-34w	10.0	11.0	2		4.0				7.0		
Cities Service Co.—Cheney, Kingman Co.,											
22-28s-5w	100.0	79.0	7						137.8		
Hutchinson, Reno Co., 22-23s-6w			†	(168.1)	(660.4)	(107.5)	(270.3)			(226.8)	
Jayhawk, Grant Co., 2-29s-35w	520.0	400.0	2&5						378.0		\$7.3
Midway, Kingman Co., 33-27s-5w	25.0	26.0	2						34.9		
Spivey, Harper Co., 5-31s-8w	70.0	25.0	1		23.9		6.9		21.5		
Sunflower, Scott Co., 17-18s-33w	250.0	150.0	3&6						161.0		
Wichita, Sedgwick Co., 17-28s-1e	130.0	79.0	1		33.2	9.9	22.4			17.3	\$20.5
Wilburton, Morton Co., 33-34s-41w	5.5	3.0	3						12.3		
Colorado Interstate Gas Co.—Lakin, Kearney											
Co., n2 of n4-29-24s-36w	2.5.0	93.0	1						14.9		
Getty Oil Co.—Medicine Lodge, 13-32s-											
12w	30.0	7.3	1		3.6				3.7		
Minneola, Ford Co., 13-29s-25w	25.0	10.9	2		7.2				6.6		
Kansas Refined Helium Co.—*Otis, Rush											
Co., 26-17s-16w	24.0	16.0	6								\$0.8
											\$4.0
Mesa Petroleum Co.—Ulysses, Grant Co.,											
10-30s-37w	242.0	95.8	2						84.3		
Mobil Oil Corp.—Hickok, Grant Co.,											
31-28s-35w	210.0	109.0	1		12.6	5.0	17.4			18.7	
National Helium Corp.—Seward Co.,											
23-33s-32w	1,000.0	680.4	3		188.2		117.8		158.8		
Northern Gas Products—Bushton, Ellsworth											
Co., 31-17s-9w	950.0	NR	2&7	437.4	591.5	69.8	169.0			152.3	
Northern Helix Co.—Northern Helix,											
Ellsworth Co., 31-17s-9w	\$20.0	500.0	NR								\$1.6
Northern Natural Gas Co.—Holcomb,											
Finney Co., 3-24s-34w	200.0	200.0	3						13.5		
Peoples Natural Gas Co.—Johnson, Stanton											
Co., nw4-33-28s-40w	7.0	3.0	2						0.9		
Total	4,988.5	3,480.6		437.4	942.7	103.6	395.6		1,056.7	245.5	24.5

†Fractionation. (Figures in parenthesis do not represent primary production, and are not added in state totals). ‡Helium. §Helium—MMcfd.

KENTUCKY

Kentucky Hydrocarbon—Kentucky HC,											
Floyd Co.	51.0	57.2	3								\$328.1
Tennessee Gas Pipeline Co.—Gabe,											
Green Co.	900.0	603.0	3								\$222.5
Total	951.0	660.2									550.6

†Ethane and heavier hydrocarbons in one stream. ‡Mixed stream, hydrocarbon liquids.

LOUISIANA

Amoco Production Co.—Lake Boeuf,											
LaFourche Par., 116-15s-18e	80.0	23.0	2						30.3		
South Jennings, Jefferson Davis Par.,											
5-10s-2w	55.0	13.0	2						18.8		
South Manchester, Calcasieu Par.,											
22-10s-7w	80.0	23.0	2						42.0		
South Pecan Lake, Cameron Par.,											
2-12s-9w	120.0	34.0	2						32.4		
South Thornwell, Jefferson Davis Par.,											
3-11s-2w	95.0	33.0	2						26.7		
TSMA, Vermilion Par., 11-14s-1e	298.0	115.0	2						91.1		
Anchor Gasoline Corp.—Krotz Springs,											
Pointe Coupee Par., 40&41-6s-7e	50.0	NR	1					10.0		3.3	
ANR Production Co.—Pelican, St. Mary											
Par., s51&52-15s-11e	200.0	160.0	7						59.4		
Arco Oil & Gas Co.—Bayou Sale, St. Mary											
Par., 17-11s-9e	97.0	58.2	2		11.8		7.0			9.0	
Arkansas Louisiana Gas Co.—Bistineau,											
Webster Par., se-36-17n-10w											
se-31-17n-9w	60.0	34.1	1					5.8		11.2	\$0.3
Calhoun, Ouachita Par., se-34-18n-1e	60.0	5.9	5							0.1	\$0.4
Gayles, Caddo Par., 30-16n-12w	20.0	6.5	5							0.3	
Sligo, Bossier Par., se-9-18s-21w	11.0	5.2	5							1.9	
Cal Gas Corp.—Beacon, Webster Par.,											
26-21-9w	70.0	18.0	2		10.0	3.6	4.0			10.2	
Chevron USA Inc.—West Cameron,											
Cameron Par., 7-15s-15w	200.0	102.0	2						73.5		
Cities Service Co.—Crowley, Acadia Par.,											
41&44-9s-1n-1e	45.0	20.0	7						17.9		
Lake Charles, Calcasieu Par., 19-10s-9w			†	(373.0)	(276.5)	(98.9)	(72.8)			(179.7)	
Saint Amelia, St. James Par.,											
12-12s-16e	38.0	30.2	2		1.2		1.2			0.8	
Claiborne Gasoline Co.—Claiborne Par.,											
20-21n-4w	NR	37.0	2		26.8	12.5	15.4		37.6		\$48.1
											\$35.5
											\$38.0
											\$102.5
											\$56.3
											\$0.8
											\$21.6
Conoco Inc.—Acadia Par., 31-9s-1w	250.0	41.8	2&7	38.1	18.9		12.7				

Company, plant, location	MMcfd			Production—1,000 gal/day (Average based on the past 12 months)							
	Gas capacity	Gas throughput	Process method	Ethane	Prop.	Isobut.	Normal or unsplit butane	LP-gas mix	Raw NGL mix	Debut. nat. gaso.	Other
Gillis, Calcasieu Par., 14-9s, 8w	200.0	170.2	2	69.3	55.3	19.0	17.2	.....	26.0	.....	¹⁰ 0.9 ¹¹ 0.9
Grand Chenier, Cameron Par., 2-39-40 155-6w	950.0	620.0	2&7	.....	.....	.....	.....	384.0	.....	.....	.....
Crystal Oil Co.—Arkana, Bossier Par., 35-23n-13w	5.0	3.0	3	.....	.....	.....	.....	.....	4.4	.....	.....
Buckshot Bayou, Franklin Par., nw¼- se¼-2-14n-8e	1.5	0.9	3	.....	.....	.....	.....	.....	2.2	.....	.....
Kings Bayou, Cameron Par., ne¼-34-14s-7w	80.0	20.3	2	.....	.....	.....	.....	.....	15.4	.....	.....
Exxon Co.—Bluewater, Acadia Par., 34-10s-1w	950.0	715.0	7	207.7	86.0	27.1	24.3	.....	.....	72.2	.....
Garden City, St. Mary's Par., 45-46-15s-10e	900.0	208.0	2	115.6	65.9	17.5	14.4	.....	.....	30.3	¹² 0.6
Grand Isle, Jefferson Par., 32-21s-25e	100.0	40.0	2	11.5	16.7	5.7	5.8	.....	.....	9.3	¹² 0.6
Lirette, Terrebonne Par., 23-32-19s-19e	300.0	97.0	2	41.4	28.9	9.8	8.2	.....	.....	19.9	¹² 0.7
Opelousas, St. Landry Par., 32-6s-4e	110.0	96.0	2	21.1	7.2	6.8	16.2	.....	.....	.....	¹² 126.0
Thibodaux, Lafourche Par., 35-36-15s-16e	45.0	9.0	2	.....	7.4	3.1	2.4	.....	.....	2.9	.....
Getty Oil Co.—Bastian Bay, Plaquemines Par., 42-21s-28e	150.0	27.0	7	.....	.....	.....	.....	.....	30.0	.....	.....
Cameron Par., 29-14s-9w	65.0	4.1	2	.....	.....	.....	.....	.....	2.2	.....	¹¹ 0.4
Hollywood, Terrebonne Par., 10-17s-17e	150.0	35.0	2	.....	.....	.....	.....	.....	39.4	.....	.....
Venice, Plaquemines Par., 25-21s-30e	65.0	38.0	2	.....	.....	.....	.....	.....	29.8	.....	.....
Gulf Oil Exploration & Production Co.— Venice, Plaquemines Par., 25-21s-30e	1,000.0	493.0	2	.....	28.1	47.0	28.7	.....	.....	108.0	⁶ 222.2
Hunt Petroleum Corp.—Kinder, Allen Par., 25-6s-5w	30.0	NR	2	.....	4.1	.....	2.7	.....	.....	1.4	.....
Jones-O'Brien Inc.—South Keatchie, DeSoto Par., 25-14n-16w	15.0	3.0	3	.....	.....	.....	.....	3.0	.....	7.0	.....
Kerr-McGee Corp.—Bayou Crook Chene, St. Martinville Par., 534-105-9e	12.5	10.0	2	.....	.....	.....	.....	.....	14.6	.....	.....
Dubach-Calhoun complex, Lincoln Par., 52&34-20n	175.0	140.0	2	.....	52.6	19.4	25.6	.....	.....	4.5	² 113.6 ²⁹ 9 ¹² 18.4
Koch Hydrocarbon Co.—Bayou Postillion, Iberia Par.	25.0	10.0	1	.....	.....	.....	.....	.....	0.5	.....	.....
LaGloria Oil & Gas Co.—Rayne, Acadia Par., 47-9-So. Rayne 2e	175.0	14.0	2	19.2	.....	.....	.....	.....	16.8	.....	.....
Liquid Products Recovery Inc.—Napoleonville No. 1, Lafourche Par.	30.0	5.0	5	.....	.....	.....	.....	.....	.....	0.6	.....
Napoleonville No. 2, Assumption Par.	11.0	2.0	5	.....	.....	.....	.....	.....	.....	0.5	.....
Vacherie, St. James Par.	10.0	3.0	5	.....	.....	.....	.....	.....	.....	0.3	.....
Louisiana Land & Exploration Co.—Pointe au Chien, Terrebonne Par., 18-19s-20e	125.0	50.0	7	.....	.....	.....	.....	.....	1.5	.....	.....
Marathon Oil Co.—Cotton Valley, Webster Par., 26-21n-10w	65.0	56.3	7	46.3	33.6	14.4	10.2	.....	.....	82.7	⁹ 3.9 ¹⁰ 6.8 ¹¹ 46.7
Mitchell Energy & Development Corp.— Jackson Par.	5.0	2.9	3	.....	.....	.....	.....	.....	3.9	.....	.....
Mobil Oil Exploration & Producing Southeast Inc.—Cameron Par., 23-15s-13w	470.0	392.0	1&7	67.6	56.5	18.2	14.9	.....	.....	43.3	.....
Cow Island, Vermilion Par., 29-13s-2e	950.0	541.0	1	107.8	166.6	61.0	40.7	.....	.....	99.4	.....
Grand Chenier, Cameron Par., 45-42-15s-6w	125.0	98.0	7	22.6	10.7	3.2	3.0	.....	.....	7.1	.....
Iowa, Jefferson Davis Par., 18-9s-6w	500.0	262.0	7	30.8	20.7	8.1	7.2	.....	.....	23.8	.....
Sea Robin, Vermilion Par., 21-13s-14e	150.0	131.0	7	59.1	33.8	9.5	10.7	.....	.....	24.3	.....
South Timbalier, LaFourche Par., 28-20s-22e	125.0	34.0	7	36.0	16.0	4.7	5.1	.....	.....	7.4	.....
Mullins & Richard—Burtville, East Baton Rouge Par., 47-8s-1e	8.0	4.0	1&2	.....	.....	.....	.....	.....	1.0	.....	¹¹ 1.5
Pano Tech Exploration Corp.—Lake LaRose, St. Martin Par., 29-9s-8e	78.5	NR	6	5.0	4.1	2.3	2.9	.....	.....	.....	¹¹ 10.4
Phillips Petroleum Co.—Rollover, Jefferson Davis Par., nw4-22-11s-3w	190.0	NR	2	.....	.....	.....	.....	.....	.....	.....	.....
Vermilion, No. Erath and Grosse Isle Par., sw4-se4-41-13s-4e	45.0	NR	2	.....	.....	.....	.....	.....	.....	.....	.....
Placid Oil Co.—Black Lake, Natchitoches Par., 14-11n-62	150.0	117.8	2	.....	.....	.....	.....	.....	242.1	.....	¹¹ 109.4
Lapeyrouse, Terrebonne Par., 71-20s-18e	100.0	27.8	2	.....	.....	.....	.....	.....	27.6	.....	¹¹ 12.6
Patterson I, St. Mary Par., 48-15s-11e	200.0	57.9	2	.....	.....	.....	.....	.....	65.2	.....	¹¹ 20.1
Patterson II, St. Mary Par., 48-15s-11e	600.0	102.6	7	.....	.....	.....	.....	.....	139.4	.....	.....
Resources Extraction & Processing Co.—Bayou Vista I, St. Mary Par., 11-15s-11e	200.0	200.0	7	64.2	24.3	7.6	7.3	.....	.....	16.0	.....
Shell Oil Co.—Bayou Goula, Iberville Par., 67-10s-12e	71.0	3.0	2	.....	.....	.....	.....	.....	3.3	.....	.....
Black Bayou, Cameron Par., 18-12s-12w	18.0	11.0	2	.....	.....	.....	.....	.....	4.4	.....	.....
Calumet, St. Mary Par., 11-12-51-52- 15s-11e	1,200.0	620.0	2	.....	.....	.....	.....	.....	314.4	.....	.....
Chalkley, Cameron Par., 27-12s-6w	23.0	7.0	2	.....	.....	.....	.....	.....	5.4	.....	.....
Crawfish, St. Charles Par., 36-13s-20e	120.0	74.0	7	.....	.....	.....	.....	.....	76.3	.....	.....
*LaPice, St. James Par., 38-12s-15e	12.0	8.0	5	.....	.....	.....	.....	.....	0.1	.....	.....
Mermentau, Acadia Par., 70-10s-2w	120.0	22.0	2	.....	.....	.....	.....	.....	34.4	.....	.....
Norco fractionator, St. Charles Par., 6-12s-8e .....	.....	.....	†	(646.9)	(337.9)	(100.4)	(120.2)	.....	.....	(193.1)	.....
North Terrebonne, Terrebonne Par., 19-20- 29-33-17s-15e	1,250.0	1,143.0	2	.....	.....	.....	.....	.....	953.6	.....	.....
Stingray, Cameron Par., 33&34-15s-13w	225.0	232.0	2	.....	.....	.....	.....	.....	95.2	.....	.....
Tebone fractionator, Ascension Par., 45&46-9s-2e .....	.....	.....	†	(356.4)	(262.2)	(79.7)	(75.9)	.....	.....	(179.3)	.....

Company, plant, location	MMcfd		Process method	Production—1,000 gal/day (Average based on the past 12 months)							Debut. nat. gaso.	Other
	Gas capacity	Gas through-put		Ethane	Prop.	Isobut.	Natural or unsplit butane	LP-gas mix	Raw NGL mix			
Timbalier, Terrebonne Par., nw4 of 32-16 sw 4 of 33-19s-19e	100.0	24.0	7	....	....	....	....	....	38.8	....	....	
Toca, St. Bernard Par., 54-14s-14e	830.0	531.0	2&7	....	....	....	....	....	590.7	....	....	
Weeks Island, Iberia Par., 13-14s-6e	129.0	34.0	2	....	4.8	....	....	....	11.8	....	....	
Yscloskey, St. Bernard par., 39-13s-15e	1,850.0	1,570.0	2	....	....	....	....	....	1,043.9	....	....	
Sid Richardson Carbon & Gasoline Co.—Hico-Knowles, Lincoln Par., 10-20n-3w	15.0	9.0	7	....	....	....	....	16.0	....	....	....	
South Louisiana Production Co.—Aymond, St. Mary Par., 13-14s-9e	50.0	33.0	7	....	....	....	....	....	40.1	....	....	
Cocodrie, Evangeline Par., 35-2s-2e	50.0	50.2	2	....	18.2	....	14.8	....	....	10.0	....	
Gibson, Terrebonne Par., 77-16s-15e	100.0	9.4	7	....	....	....	....	....	9.9	....	....	
St. Landry, Evangeline Par., 35-2s-2e	60.0	47.6	2	....	20.3	....	15.3	....	....	9.9	....	
Sun Gas Co.—Belle Isle, St. Mary Par., 28-17s-10e	200.0	65.4	2	....	....	....	....	....	40.6	....	....	
Delhi, Richland Par., 15-17n-9f	22.0	19.5	6	11.8	16.7	5.3	16.9	....	....	29.3	....	
*Fordoche, Pointe Coupee Par., 41-6s-8e....	70.0	12.7	2	....	....	....	....	....	24.0	....	....	
Gillis-English Bayou, Calcasieu Par., 26-8s-8w	20.0	25.0	2	....	....	....	....	....	27.0	....	....	
Maurice, Lafayette Par., 31-10s-4e	32.0	14.1	2	....	....	....	....	....	23.6	....	....	
South Sarepta, Bossier Par., 21-22n-11w ...	25.0	11.0	2	....	5.0	....	5.3	....	....	4.8	....	
Superior Oil Co.—Dulac, Terrebonne Par., 2&68 19s-17e	50.0	51.0	7	....	....	....	....	....	82.0	....	....	
Lowry, Cameron Par., 16-12s-4w	300.0	251.5	2&7	68.3	70.3	25.6	17.2	....	....	42.3	2.5	
Tenneco Oil Co.—*Stephens, Claiborne Par., 6&7-13s-12e	35.0	18.4	2	....	1.3	....	1.6	....	....	3.0	....	
Tensas Processing Corp.—Tensas Par., 21-10n-11e	27.5	5.0	1	....	....	....	....	....	8.0	....	1.2	
Texaco Inc.—Alligator Bayou, St. Martin Par. sw14-34-10s-9e	27.0	NR	7	....	....	....	....	....	47.0	....	....	
Floodway, St. Mary Par., 16-16s-16e	900.0	NR	7	....	....	....	....	....	945.0	....	....	
Fordoche, Point Coupee Par., 28-6s-8e	30.0	NR	2	....	22.0	....	16.0	....	....	9.0	....	
Henry Vermilion Par., 21-13s-4e	825.0	NR	2	346.5	283.5	93.0	....	....	420.0	....	....	
Paradis, St. Charles Par., 29-14s-20e	800.0	NR	2	200.0	429.0	....	237.0	....	....	205.0	....	
Sea Robin, Vermilion Par., 21-13s-4e	900.0	NR	7	253.0	198.0	71.0	69.0	....	....	147.0	....	
Texas Gas Exploration Corp.—Eunice, Acadia Par., nw1/4-12-7s-2w	1,100.0	598.0	2	246.0	157.0	65.0	50.0	....	....	118.0	....	
Union Oil Co. of California—Houma, Terrebonne Par., 26-17s-17e	80.0	24.7	2	....	....	....	....	....	33.1	....	....	
Union Texas Petroleum—Rayne, Acadia Par., Sligo, Bossier Par., 290.0	290.0	26.0	1	(217.5)	(84.9)	(26.6)	(17.9)	....	(78.5)	....	....	
Toca, St. Bernard Par., 160.0	160.0	115.0	2	....	9.2	3.3	4.7	....	....	10.6	....	
Warren Petroleum Co.—Johnsons Bayou, Cameron Par., 32&33-15s-12w	NR	20.0	7	....	....	....	....	....	21.0	....	....	
Krotz Springs, St. Landry Par., 22-6s-7e	NR	24.0	2	....	27.0	....	....	....	55.0	....	11.0	
Total	23,688.3	14,410.6		1,929.0	1,905.5	544.8	688.0	418.8	5,757.9	1,145.6	1,044.2	

†Fractionation. (Figures in parenthesis do not represent primary production, and are not added in state totals). ‡All figures capacity.

MICHIGAN

Amoco Production Co.—Kalkaska, Kalkaska Co., 31-27n-7w	185.0	120.0	7	....	79.0	....	....	....	126.9	....	1101.0	....
Marathon Oil Co.—Scipio, Hillside Co., 2-5s-3w	38.0	14.7	2	....	28.9	....	....	....	....	24.5	....	....
Michigan Consolidated Gas Co.—Leonard, Oakland Co., Addison e1/4-15-5n-11e	20.0	7.0	3	....	....	....	....	....	5.8	....	10.8	....
Romeo, Macomb Co., 14-4n-12e	15.0	15.0	3	....	....	....	....	....	10.8	....	18.8	....
Michigan Hydrocarbons Inc.—Chester, Otsego Co., 27-2n-10e	30.0	NR	3	....	2.0	....	1.8	....	....	1.1	2.2	....
Michigan Wisconsin Pipeline Co.—*Loreed, Osceola Co., 30-18n-10w	54.0	25.0	2	....	2.6	0.5	1.7	....	....	3.0	....	....
Mobil Oil Corp.—Aurelius, Ingham Co., 36-2n-2w	23.0	17.0	2	....	15.6	....	....	....	19.0	....	1.6	....
Shell Oil Co.—Kalkaska Co., 32-27n-7w	350.0	235.0	2&7	....	....	....	....	....	945.0	....	96.0	....
Total	715.0	457.7		....	128.1	0.5	3.5	....	1,107.5	28.6	210.4	

MISSISSIPPI

Amoco Production Co.—Quitman Bayou, Adams Co., 2-8n-3w	1.0	0.9	3	....	....	....	....	0.1	....	0.5	....	....
Crystal Oil Co.—Waveland, Hancock Co., 10-8s-51w	96.0	57.6	7	....	....	....	....	....	25.6	....	....	....
Getty Oil Co.—Bay Springs, Jasper Co., 27-2n-10e	10.0	1.3	2	....	....	....	....	3.0	3.8	....	....	....
Shell Oil Co.—Goodwater, Clarke Co., 5-10n-8w	15.0	2.9	3	....	1.3	....	1.4	....	....	1.2	....	....
Thomasville, Rankin Co., 27-4n-3e	100.0	89.0	....	....	....	....	....	....	....	....	....	....
Southern Natural Gas Co.—*Muldou, Monroe Co., 27-15s-6e	750.0	357.0	5	....	....	....	....	....	16.9	....	....	....
Texas Oil & Gas Corp.—Harmony, Clarke Co., 26-2n-14e	30.0	7.0	3	....	8.0	....	7.5	....	....	6.5	14.0	....
Total	1,002.0	515.7		....	9.3	....	8.9	3.1	46.3	8.2	4.0	

MONTANA

Crystal Oil Co.—Sioux Pass, Richland Co., sw1/4-19-25n-58e	1.5	1.0	3	....	....	....	....	....	4.7	....	....	....
Flying J Inc.—Westco Refining, Glacier Co., 22-33n-5w	30.0	18.0	1	....	7.0	....	8.6	....	6.2	....	....	....
McCulloch Gas Processing Corp.—*Fairview, Richland Co., 10-24n-57e	6.0	3.0	2	....	6.0	....	2.0	....	6.0	....	....	....
PGP Gas Products Inc.—Mon-Dak, Richland Co., ne4-18-22-60e PMM	NR	3.6	3	....	4.0	....	....	....	6.4	....	10.4	....

Company, plant, location	MMcfd		Process method	Production—1,000 gal/day (Average based on the past 12 months)							
	Gas capacity	Gas throughput		Ethane	Prop.	Isobut.	Normal or unsplit butane	LP-gas mix	Raw NGL mix	Debut. nat. gas	Other
Shell Oil Co.—Cabin Creek, Fallon Co., 18-10n-58e	1.7	1.7	3	.....	.....	.....	.....	.....	5.0	.....	.....
South Pine, Wibaux Co., 10-11n-57e	1.2	1.1	3	.....	.....	.....	.....	.....	5.6	.....	.....
Stateline, Richland Co., 7-22n-60e	12.0	7.0	3	.....	15.3	.....	.....	.....	15.3	.....	.....
True Oil Co.—Bob Rhodes, Richland Co., 4-25n-58e	4.0	0.9	3	.....	.....	.....	.....	.....	5.6	.....	.....
Total	60.9	36.3		.....	32.3	.....	10.6	.....	54.8	.....	0.4

NEBRASKA

Cities Service Co.—Kimball, Kimball Co., 10-12n-55w	10.5	1.0	1	.....	2.0	.....	.....	.....	2.5	.....	.....
Marathon Oil Co.—West Sidney, Cheyenne Co., 4-12n-50w	12.0	3.0	2	.....	3.4	.....	2.0	.....	.....	2.1	.....
Total	22.5	4.0		.....	5.4	.....	2.0	.....	2.5	2.1	.....

NEW MEXICO

Amoco Production Co.—*Empire Abo, Eddy Co., 3-18s-27e	42.5	37.9	7	99.7	65.8	.....	33.9	.....	.....	36.0	.....
Cabot Corp.—Hobbs, Lea Co., 28-18s-36e	61.0	47.6	7	.....	.....	.....	.....	.....	83.3	.....	.....
Cities Service Co.—Bluitt, Roosevelt Co., 1s-8s-36	37.0	30.9	2	19.3	37.3	7.1	15.3	.....	.....	12.8	.....
Burton Flats, Eddy Co., 14-20s-28e NMPM	7.5	3.9	7	.....	.....	.....	.....	.....	16.4	.....	.....
Empire Abo, Eddy Co., 35-17s-27e	4.0	3.4	7	.....	.....	.....	.....	.....	11.6	.....	.....
Conoco Inc.—Maljamar, Lea Co., 21-17s-32e	26.0	8.6	2	20.6	20.6	.....	10.8	.....	.....	8.1	10.1
El Paso Natural Gas Co.—Blanco, San Juan Co., n2-n2-14-29n-11w	558.0	482.1	1	.....	.....	.....	.....	.....	398.2	.....	.....
Chaco, San Juan Co., sw4-16-26n-12w	594.0	529.5	2	.....	.....	.....	.....	.....	636.7	.....	.....
Jal No. 1, Lea Co., 26s-36-37e	303.0	122.6	.....	.....	.....	.....	.....	.....	42.8	.....	.....
Jal No. 3, Lea Co., nw4-sw4-33-24s-37e	225.0	136.9	3	.....	.....	.....	.....	.....	140.3	.....	.....
Jal No. 4A, Lea Co., se4-se4-31-23s-37e and s2-sw4-32-23s-37e	185.0	185.3	1	.....	.....	.....	.....	.....	133.5	.....	.....
Jal No. 4B, Lea Co., se4-se4-31-23s-37e and s2-sw4-32-23s-37e .....	.....	.....	1	.....	(86.7)	(105.6)	.....	.....	.....	(124.3)	.....
San Juan Co., 1-29n-15w	71.0	49.5	1	.....	6.9	.....	13.9	.....	.....	15.3	.....
Wingate, McKinley Co., 16&17-15n-17w .....	.....	.....	1	(321.8)	(101.8)	(183.1)	.....	.....	(227.8)	.....	.....
Gas Co. of New Mexico, Division of Southern Union Co.—Avalon, Eddy Co., 9-21s-27e	30.0	17.0	2	.....	.....	.....	.....	13.5	.....	.....	.....
Getty Oil Co.—Eunice No. 1, Lea Co., 27-22s-37e	100.0	95.6	7	.....	77.3	13.9	38.8	.....	50.9	.....	163.2
Kansas Refined Helium Co.—*Navajo Ref. Helium, San Juan Co., 35-28n-9w	0.3	0.1	6	.....	.....	.....	.....	.....	.....	10.2	90.1
Marathon Oil Co.—Indian Basin, Eddy Co., 23-21s-23e	210.0	89.0	2	.....	.....	.....	.....	.....	99.6	.....	120.0
Minerals Inc.—Lea Co., sw1/4-sw1/4-ne1/4 36-18s-36e	45.0	34.2	7	.....	.....	.....	.....	.....	.....	.....	62.2
Northern Natural Gas Co.—Hobbs, Lea Co., 6-19s-37e	220.0	148.0	2	.....	125.0	.....	.....	.....	101.0	.....	.....
Perry Gas Processors Inc.—Antelope Ridge, Lea Co., Unit K-34-23-24	9.0	4.0	1	.....	.....	.....	.....	.....	.....	.....	.....
Phillips Petroleum Co.—Artesia, Eddy Co., s2-se4-7-18s-28e	43.0	NR	7	.....	.....	.....	.....	.....	.....	.....	.....
Eunice, Lea Co., ne4-5-21s-36e	80.0	NR	7	.....	.....	.....	.....	.....	.....	.....	.....
Hobbs, Lea Co., n2nw4-4-19s-38e	38.0	NR	1	.....	.....	.....	.....	.....	.....	.....	.....
Lee, Lea Co., sw4-se4-30 nw4-ne4-31-17s-35e	85.0	NR	2	.....	.....	.....	.....	.....	.....	.....	.....
Lovington, Lea Co., sw4-31-16s-37e	10.0	NR	1	.....	.....	.....	.....	.....	.....	.....	.....
Lusk, Lea Co., nw4-ne4-19-19s-32e	60.0	NR	2	.....	.....	.....	.....	.....	.....	.....	.....
Southern Union Refining Co.—Kutz No. 1, San Juan Co., 11, 12, 13, 14-28n-11w	97.0	124.0	2	.....	.....	.....	.....	.....	273.9	.....	.....
Kutz No. 2, San Juan Co., 11, 12, 13, 14-28n-11w	80.0	60.0	7	.....	.....	.....	.....	.....	179.4	.....	.....
Lybrook, Rio Arriba Co., 14-23n-7w	70.0	57.0	7	.....	.....	.....	.....	.....	205.0	.....	.....
Tenneco Oil Co.—Gallegos Canyon, San Juan Co., se1/4-sw1/4-13-25n-10w NMPM	19.4	6.6	7	.....	.....	.....	.....	.....	29.1	.....	.....
Texaco—Buckeye, Lea Co., 36&1 17s and 18s-34e	22.5	NR	6	.....	.....	.....	.....	.....	144.6	.....	.....
Tipperary Corp.—Denton, Lea Co., 2-7-15s-37e	12.5	3.5	3	.....	.....	.....	.....	.....	18.0	.....	.....
Warren Petroleum Co.—Eunice, Lea Co., ne4-3-22s-37e	NR	68.0	7	.....	.....	.....	.....	.....	356.0	.....	.....
Monument, Lea Co., ne4-3-22s-37e and 36-19s-36e	NR	69.0	7	.....	24.0	.....	.....	.....	226.0	.....	.....
Saunders, Lea Co., 34-14s-33e	NR	22.0	6	.....	.....	.....	.....	.....	144.0	.....	.....
Snyder Ranch, Eddy Co., sw4-sw4-15-19s-31e	NR	30.0	7	.....	.....	.....	.....	.....	31.0	.....	.....
Vada, Lea Co., s2-sw4-nw4-23-10s-33e	NR	5.0	3	.....	.....	.....	.....	.....	40.0	.....	.....
Total	3,587.9	2,742.0		139.6	356.9	21.0	112.7	13.5	3,392.4	72.2	245.7

†Fractionation. (Figures in parenthesis do not represent primary production, and are not added in state totals). ‡All figures are capacity. §Helium—MMcfd.

NORTH DAKOTA

Aminoil USA Inc.—Tioga, Williams Co., 26-157n-95w	105.0	66.5	2	.....	72.8	.....	46.9	.....	.....	34.8	.....
Amoco Production Co.—Kildeer, Dunn Co., 6-14n-94w	250.0	124.0	3	.....	2.7	.....	0.8	.....	.....	0.5	.....
Cities Service Co.—Lignite, Burke Co., nw4-7-162n-91w	20.0	3.6	2	.....	4.9	.....	3.5	.....	.....	2.7	.....
Ecological Engineering Systems Inc.—Teddy Roosevelt, Billings Co., nw4-ne4-16-142n-99w-5PM	35.0	11.1	3	.....	14.3	.....	.....	.....	15.5	.....	18.6

Company, plant, location	MMcfd		Process method	Production—1,000 gal/day (Average based on the past 12 months)							Other
	Gas capacity	Gas throughput		Ethane	Prop.	Isobut.	Normal or unsplit butane	LP-gas mix	Raw NGL mix	Debut. nat. gaso.	
Kerr-McGee Corp.—Boxcar Butte, McKenzie Co., 251-148n-102w	6.0	NR	3	....	2.8	....	2.0	....	....	1.5	....
Phillips Petroleum Co.—Williston, Williams Co., 26-154n-102w	5.0	NR	3	....	....	....	....	....	....	....	....
True Oil Co.—Red Wing Creek, McKenzie Co., 27-148n-101w	10.0	NR	2	....	7.6	....	....	9.7	....	....	....
Warren Petroleum Co.—Little Knife, Dunn Co., 16-141n-98w	NR	17.0	3	....	26.0	....	....	....	37.0	....	....
Total	452.2	239.0		....	131.1	....	53.2	9.7	52.5	39.5	8.6

OKLAHOMA

Aminoil USA Inc.—Aline, Alfalfa Co., 7-23n-11w	45.0	31.6	2	....	22.2	....	....	....	23.8	....	....
Fox, Carter, Co., 28-2s-3w	70.0	35.2	7	....	7.0	21.3	....	....	23.0	....	109.7
Lucien, Noble Co., 18-20n-2w	16.0	13.9	7	....	....	....	....	....	40.5	....	....
Amoco Production Co.—Elmwood, Beaver Co., 24-2n-24ecm	80.0	42.6	2	....	....	....	....	....	50.2	....	....
Hitchcock, Blaine Co., 13-17n-11w	55.0	31.6	7	....	....	....	....	....	38.6	....	10.2
Mooreland, Woodward Co., 30-23n-18w	150.0	81.5	7	....	....	....	....	....	179.8	....	16.5
North Okarche, Kingfisher, 8-15n-7w	25.0	16.7	5	....	....	....	....	....	1.7	....	40.2
Okeene, Blaine Co., 36-19n-11w	39.0	25.9	2	....	....	....	....	17.9	....	....	11.2
Star-Lacey, Blaine Co., 2-19n-10w	20.0	5.8	2	....	....	....	....	....	16.1	....	10.1
Anadarko Production Co.—North Richland Center, Texas Co., 33-6n-12ecm	25.0	23.0	2	....	21.0	....	....	....	24.0	....	....
Arco Oil & Gas Co.—Covington, Garfield Co., w/2-sw/4-19-22n-3w	15.0	16.7	7	10.7	14.2	2.4	6.4	....	....	8.0	10.3
Drumright, Creek Co., nw/4-sw/4-28-18n-7e	15.0	5.5	1	....	14.0	....	9.7	....	....	12.7	10.5
Seminole Co., sw/4-ne/4-10 8n-6e	20.0	7.6	1	....	21.8	2.4	7.6	....	51.0	13.8	12.6
Cabot Corp.—Beaver Co., 25-5n-23ecm	20.0	17.9	7	....	....	....	....	....	....	....	....
Champlin Petroleum Co.—Enid, Garfield Co., 34-23n-6w	36.0	34.9	2	....	....	....	....	....	....	....	....
Witcher, Oklahoma Co., 1-12n-3w	15.0	10.3	2	....	10.5	....	5.1	92.2	....	17.8	....
Chevron USA Inc.—Marietta, Love Co., 31-7s-3e	20.0	1.3	2	....	0.8	....	0.9	....	....	5.5	....
Cities Service Co.—Ambrose, Kay Co., 9-27n-1w	375.0	239.0	2	....	61.3	14.9	36.9	....	....	33.8	44.9
Garrett, Kay Co., se41s134-271n-1e	4.3	1.0	2	....	....	....	....	....	....	....	....
Murdock, Texas Co., 32-5n-16ecm	39.0	24.0	7	....	....	....	....	....	1.6	....	....
Rodman, Garfield Co., 27-20n-R&W	90.0	44.2	7	55.4	41.9	6.7	16.5	....	63.5	30.4	....
Colorado Interstate Gas Co.—Keyes, Cimarron, e2 of se4-17-5n-7e	50.0	30.0	3	....	....	....	....	....	4.8	....	....
Conoco Inc.—Cashion, Kingfisher Co., 15n-5w-se4-20	30.0	15.1	3	....	7.0	1.4	4.6	....	....	7.4	10.1
Hennessey, Kingfisher Co., 36-19n-7w	30.0	27.6	7	....	....	....	....	....	....	....	....
Medford, Grant Co., 32-27n-5w	30.0	11.5	2	....	4.4	0.9	1.9	111.8	....	1.7	....
CRA Inc.—Lamont, Grant Co., 19-26n-3w	13.0	10.0	2	....	....	....	....	....	17.5	....	....
Dalco Petroleum U.S. Ltd.—Cashion, Kingfisher Co., se4-6-15n-5w	10.0	2.5	1	....	....	....	....	....	5.0	....	....
Dorchester Gas Producing Co.—Hooker, Hugoton Co., 8-4n-17ecm	75.0	70.0	7	72.1	53.8	7.8	18.5	....	....	18.4	....
Eason Oil Co.—Crescent, Logan Co., 34-17n-4w	45.0	3.0	2	18.0	45.0	5.5	19.0	....	....	15.0	....
El Paso Natural Gas Co.—Beaver Co., se4-ne4-18-3n-26e	40.0	19.6	3	....	....	....	....	....	17.8	....	....
Enserch Exploration Inc.—Katie, Garvin Co., 36-2n-2w	20.0	4.5	2	....	....	....	....	....	....	....	....
Wallville, Garvin Co., 27-4n-3w	6.0	3.9	2	....	....	....	....	....	9.9	....	....
Excelsior Oil Corp.—Tyrone, Texas Co., 19-06n-19ecm	66.0	36.8	2	....	....	....	....	....	5.0	....	....
Exxon Co.—Camargo, Dewey Co., 10-18n-19w	15.0	9.0	2	....	9.9	8.3	....	....	69.0	....	....
Dover-Hennessey, Kingfisher Co., 1-18n-7w	80.0	69.0	7	....	....	....	....	....	324.5	....	....
Getty Oil Co.—East Velma Middle Block, Stephens Co., 1-2w-4w	30.0	25.9	2	....	....	....	....	....	31.5	....	....
Velma, Stephens Co., 23-1s-sw	100.0	67.8	7	....	....	....	....	....	240.6	....	....
Grimes Gasoline Co.—Okemah, Okfuskee Co., 23-11n-9e	1.0	0.6	1	....	....	....	....	....	2.8	....	....
Kerr-McGee Corp.—Milfay, Creek Co., 21-15n-7e	12.0	NR	2	....	3.1	....	1.3	....	....	3.4	....
Koch Oil Co.—Fitts, Pontotoc Co., 30-2n-7e	12.0	1.2	3	....	1.3	....	....	....	....	3.7	....
Ladd Petroleum Corp.—Leonel, Dewey Co., 14-16n-14w	26.0	9.0	3	....	....	....	....	....	13.4	....	11.4
Mapco Inc.—SW Davis, Murray Co., 11-1s-1e	50.0	38.8	7	....	....	....	....	....	47.4	....	....
Tyrone, Texas Co., 11-6n-18e	60.0	41.6	7	....	....	....	....	....	98.4	....	2.1
Mobil Oil Corp.—Chitwood, Grady Co., 34-5n-6w	24.0	12.9	2	....	19.3	....	....	....	19.3	....	1.5
NE Trail, Dewey Co., 1-17n-18w	18.5	4.1	2	....	12.0	....	....	....	11.7	....	0.3
Postle Hough, Texas Co., 13-5n-13ecm	50.0	46.0	7	....	16.0	....	....	....	59.0	....	0.5
*Putnam-Oswego, Dewey Co., 35-16n-16w	20.0	4.7	3	(All products fractionated at NE Trail)							....
Seiling, Woodward Co., 32-20n-17w	70.0	38.3	7	(All products fractionated at NE Trail)							....
Sholem Alechem, Stephens Co., 2-1s-4w	11.0	1.3	3	(All products fractionated at NE Trail)							....
West Putnam, Dewey Co., 9-17n-17w	250.0	167.0	2	75.0	....	....	....	....	53.0	....	....
Mustang Gas Products Co.—Calumet, Canadian Co., ne4-28-14n-9w	50.0	NR	5	....	....	....	....	....	....	....	....
Northern Natural Gas Co.—Cabot-Highland, Beaver Co., 18-4n-27e	30.0	24.0	5	....	....	....	....	....	....	....	....
Perry Gas Processors Inc.—Dewey Co., 7-13-18 21s-25e	140.0	NR	1	....	....	....	....	....	....	....	....
Phillips Petroleum Co.—Bradley, Garvin Co., ne4-nw4-18-4n-4w	56.0	NR	3	....	....	....	....	....	....	....	....
Cimarron, Woodward Co., e2-ne4-27-20n-17w	25.0	NR	7	....	....	....	....	....	....	....	....
Creek, Tulsa Co., s2-sw4-nw4-7-17n-13e				....	....	....	....	....	....	....	....

Company, plant, location	MMcfd		Process method	Production—1,000 gal/day (Average based on the past 12 months)							
	Gas capacity	Gas throughput		Ethane	Prop.	Isobut.	Normal or unsplit butane	LP-gas mix	Raw NGL mix	Debut. nat. gaso.	Other
Kingfisher Co., nw4-sw4-9-15n-5w.....	175.0	NR	7	.....	.....	.....	.....	.....	.....	.....	.....
Norge, Grady Co., ne4-3-6n-8w.....	27.0	NR	3	.....	.....	.....	.....	.....	.....	.....	.....
Oklahoma Co., ne4-sw4-1-11n-3w.....	16.0	NR	1	.....	.....	.....	.....	.....	.....	.....	.....
Sooner No. 1, Major Co., se4-se4-17-20n-9w	12.0	NR	3	.....	.....	.....	.....	.....	.....	.....	.....
Pioneer Gas Products Co.—Binger, Caddo Co.,											
26-10n-11w.....	15.0	3.9	7	.....	.....	.....	.....	14.6	.....	1.5	.....
Madill, Marshall Co., 32-7e-5s.....	27.0	20.9	2	.....	21.1	5.2	.....	.....	14.1	.....	.....
Ringwood, Major Co., 11-22n-10w.....	80.0	47.5	2&7	.....	.....	.....	.....	129.9	.....	28.2	.....
Shell Oil Co.—Seiling, Dewey Co., 4-19n-17w	75.0	45.0	2	.....	38.6	.....	.....	.....	38.0	.....	.....
Sohio Petroleum Co.—Elmore, Garvin Co.,											
17-1n-2w.....	75.0	63.0	1&2	.....	12.0	.....	16.0	.....	.....	17.0	65.0
Sun Gas Co.—Carney, Lincoln Co., 12-15n-2e	17.5	9.4	2	.....	.....	.....	.....	.....	22.7	.....	.....
Cushing, Payne Co., 15-18n-4e.....	3.0	1.2	3	.....	.....	.....	.....	.....	1.3	.....	.....
*Goldsby Central, McClain Co., 3-7n-3w.....	45.0	39.7	7	.....	.....	.....	.....	.....	125.0	.....	.....
Laverne, Harper Co., 20-26n-25w.....	225.0	140.0	7	.....	56.7	12.6	29.6	.....	.....	37.7	184.4
Steedman, Pontotoc, 36-5n-7e.....	3.0	0.3	2	.....	.....	.....	.....	.....	1.4	.....	.....
Stillwater, Payne Co., 16-18n-2e.....	5.0	0.7	3	.....	.....	.....	.....	.....	1.7	.....	.....
Tonkawa, Kay Co., 30-25n-1w.....	12.0	1.1	3	.....	.....	.....	.....	.....	3.1	.....	.....
Wakita, Grant Co., 5-27n-7w.....	17.0	8.1	2	.....	.....	.....	.....	.....	22.2	.....	.....
Tenneco Oil Co.—Ames, Major, 12-20n-10w..	65.0	27.7	2	.....	.....	.....	.....	.....	55.3	.....	.....
Texaco Inc.1—Apache, Caddo Co., 2-5n-12w..	7.5	NR	3	.....	3.0	.....	.....	7.0	.....	.....	.....
Camrick, Beaver Co., 31-1n-20 ecm.....	45.0	NR	2	.....	.....	.....	.....	.....	8.7	.....	.....
Enville, Love Co., 7-7s-3e.....	23.0	NR	2	.....	10.3	.....	.....	.....	.....	6.2	.....
Texas Oil & Gas Corp.—Beaver Co., 9-1n-27e.	75.0	44.0	7	.....	.....	.....	6.5	.....	.....	.....	.....
Cimarron, Blaine Co., 24-18n-13w.....	100.0	85.0	7	.....	.....	.....	.....	.....	85.0	.....	11.0
Custer Co., sw-4nw-4 34-14n-16w.....	50.0	50.0	2	.....	.....	.....	.....	.....	172.0	.....	13.0
El Reno, Canadian Co., nw-4sw-4-33-14n-7w	75.0	66.0	7	.....	.....	.....	.....	.....	74.0	.....	13.0
Jeffries, Major Co., sw-4nw-4 19-23n-12w..	20.0	5.0	2	.....	.....	.....	.....	.....	245.0	.....	16.0
Watonga, Kingfisher Co., w2-se4-35-15n-9w	25.0	25.0	7	.....	.....	.....	.....	.....	10.0	.....	10.4
Woodward Co., sw4-nw4-29-23n-21w.....	75.0	52.0	7	.....	.....	.....	.....	.....	49.0	.....	11.0
Union Oil Co. of California—Caddo, Carter Co.,									99.0	.....	12.4
23-3s-1e.....	10.0	5.8	3	.....	6.5	.....	.....	.....	.....	5.7	.....
Union Texas Petroleum Corp.—Chaney Dell,											
Major Co., 35-23n-10w.....	115.0	90.0	2&7	.....	.....	.....	.....	.....	188.3	.....	.....
Edmond, Oklahoma Co.....	12.0	11.0	7	.....	.....	.....	.....	.....	23.4	.....	.....
Piedmont, Canadian Co.....	15.0	14.5	7	.....	.....	.....	.....	.....	35.4	.....	.....
Warren Petroleum Co.—Kingfisher Co.,											
11-15n-9w.....	NR	2.0	7	.....	.....	.....	.....	.....	2.0	.....	.....
Knox, Grady Co., 33-3n-5w.....	NR	19.0	2	.....	6.0	.....	.....	.....	27.0	.....	.....
Leedey, Roger Mills Co., 32-16n-21w.....	NR	7.0	7	.....	.....	.....	.....	.....	7.0	.....	.....
Maysville, Garvin Co., 18-4n-2w.....	NR	52.0	7	.....	7.0	8.0	27.0	.....	39.0	.....	161.0
Mocane, Beaver Co., 18-5n-25e-ecm.....	NR	71.0	2	.....	.....	.....	25.0	.....	31.0	.....	95.0
Total.....	4,462.4	2,984.8		156.2	677.7	97.4	231.2	372.0	3,120.0	266.6	736.0

†All figures are capacity.

TEXAS

Adobe Oil Corp.—*Apple Creek, Glasscock Co.,											
8 mi e of Garden City.....	25.0	6.0	7	.....	.....	.....	.....	.....	20.0	.....	.....
Sale Ranch, Martin Co., 23-1n-37 10 mi nw											
of Stanton.....	16.0	10.0	2	.....	.....	.....	.....	.....	66.0	.....	.....
Aminoil USA Inc.—Birthright, Hopkins Co.	30.0	10.5	3	.....	8.6	.....	.....	.....	16.7	.....	.....
East Chapa, Live Oak Co.....	50.0	24.5	7	.....	.....	.....	.....	.....	18.7	.....	.....
Amoco Gas Co.—Texas City, Galveston Co.,											
1.814 acre tract in John Grant A-72.....	140.0	81.5	7	.....	.....	.....	.....	.....	20.1	.....	11.3
Amoco Production Co.—*Burnell-North Pettus,											
Bee Co., A-591.....	180.0	42.1	1	18.8	14.0	.....	6.8	.....	.....	17.0	10.6
*Edgewood, Van Zandt Co., Z. Roberts A-702.	60.0	18.3	2	.....	17.1	.....	17.9	.....	.....	5.0	164.5
Hastings, Brazoria Co., 1-ACH-DA-416.....	30.0	30.0	7	.....	.....	.....	.....	.....	30.3	.....	25.7
*La Rosa, Refugio Co., Jose M. Aldrete.....	11.0	11.1	3	.....	.....	.....	.....	.....	.....	.....	10.5
Levelland, Hockley Co., Labor 7, League 72,											
Val Verde School Land.....	40.0	23.7	1	.....	63.2	.....	41.1	.....	.....	35.6	.....
*Luby, Nueces Co., Canutillo Colony Dutch											
Co.....	90.0	22.7	2	.....	4.5	.....	6.8	.....	.....	10.2	12.7
Midland Farms, Andrews Co., 8-42-T-T-N											
G&MMB&A.....	45.0	10.3	7	.....	.....	.....	.....	.....	77.8	.....	.....
Monohans, Winkler Co., 24-10 PSL.....	5.0	6.3	3	.....	.....	.....	.....	.....	12.5	.....	.....
North Cowden, Ector Co., 34-35-43-1M T&P											
RR.....	45.0	22.3	7	.....	43.6	.....	36.2	.....	.....	31.3	74.7
Old Ocean, Brazoria Co., Charles Breen											
League A-46.....	570.0	230.2	2	131.2	79.1	23.3	22.4	.....	.....	72.3	15.1
Prentice, Yoakum Co., 20K PSL.....	6.0	.....	.....	.....	.....	(not reported)	.....	.....	.....	.....	.....
Slaughter, Hockley Co., 14-15-59 Edwards &											
Scurry CSL.....	80.0	36.3	1	.....	82.5	.....	65.3	.....	.....	52.2	82.7
South Fullerton, Andrews Co., 8-A 48 PSL..	10.0	9.9	7	.....	.....	.....	.....	.....	106.3	.....	.....
*South Gillock, Galveston Co., John Sellers											
A180.....	28.0	26.6	2	.....	.....	.....	.....	.....	8.1	.....	11.1
Urbana, San Jacinto Co., S. S. Lanier A-200 .	8.5	5.0	3	.....	.....	.....	.....	.....	.....	.....	15.7
West Yantis, Wood Co., 3 Oscar Engledon											
A-181.....	30.0	12.0	2	.....	.....	.....	.....	.....	.....	.....	44.3
White Flat, Nolan Co., John Clark A-287 ..	6.5	.....	.....	.....	.....	(not reported)	.....	.....	.....	.....	.....
*Willamar Miocene, Willacy Co., A. J. Jones											
Estate Share 13.....	75.0	17.6	5	.....	.....	.....	.....	.....	.....	.....	10.6
Anchor Gasoline Corp.—Tabasco, Hidalgo Co.,											
nw corner of Tract 322, Las Ejidas de											
Reynosa Vieja Grant.....	67.0	NR	1	.....	.....	.....	.....	10.6	.....	3.1	.....
Arco Oil and Gas Co.—*Block 31, Crane Co.,											
33-31 Univ. Lands.....	180.0	209.1	2	1.5	121.0	.....	72.3	.....	.....	57.8	.....
Crane, Upton Co., 128-D CCS&RR Co.....	15.0	7.3	3	6.6	6.5	.....	3.9	.....	.....	3.5	10.1
Crittenden, Winkler Co., 24-C23-PSL.....	50.0	22.6	7	19.0	10.8	2.3	3.0	.....	.....	5.8	.....
El Dorado, Schleicher Co., 81-TT-TC RR	56.0	16.2	1	.....	23.8	.....	11.3	.....	0.1	9.0	12.6
Fashioning, Atascosa & Karnes Co., 131 Wm.											
Smith.....	12.0	3.1	5	.....	0.2	.....	0.3	.....	.....	0.6	.....

Company, plant, location	MMcfd			Production—1,000 gal/day (Average based on the past 12 months)								Debut. nat. gaso.	Other
	Gas capacity	Gas through-put	Process method	Ethane	Prop.	Isobut.	Normal or unsplit butane	LP-gas mix	Raw NGL mix				
Hull, Liberty Co., Wm. Smith A-342	18.0	2.2	2		1.8		1.4			1.3	¹¹ 0.1		
Longview, Gregg Co., J. Moseley	35.0	10.0	2&7	27.4	77.6		46.6			33.2	¹¹ 2.1		
*Midland Co., 17-40-4s T&PRR	12.0	7.6	3	3.5	4.4		2.8			2.4	¹¹ <0.1		
Nueces River, Live Oak Co., Cameron CSL													
32-A-34	90.0	61.8	3	10.5	18.2		13.9			11.5	¹¹ 0.1		
Price, Rusk Co., J. B. Cadena	15.0	2.6	1		5.5		5.8			10.6	¹¹ 0.2		
Refugio Co.	6.5	3.1	3		0.1	0.1	0.1			0.7			
Silsbee, Hardin Co., George W. Brooks A-4 ,	50.0	12.2	2	5.0	10.6	3.0	3.4			5.2	¹¹ 0.1		
Taft, San Patricio Co., 48&48A Coleman													
Fulton Pasture Lands	40.0	27.2	2		5.9		6.0			6.0	¹¹ 0.3		
Arkansas Louisiana Gas Co.—Jefferson, Marion													
Co., Heirs of John Hanks A-188	3.5	1.4	5							0.4			
Waskom, Harrison Co., J. Blair	205.0	129.1	2		10.9	7.2	11.4			35.6	¹⁰ 0.4 ¹⁰ 1.8		
Willow Springs, Gregg Co., P. P. Rains	20.0	4.9	5							1.1			
Black Hawk Gasoline Corp.—Jack Co., R.													
Stanton, A-1329	2.0	1.0	3						16.7		¹¹ 12.8		
Breckenridge Gasoline Co.—Eliasville, Stephens													
Co., 1174 TE&L A-503	5.0	2.0	2		2.0		0.8			2.3			
Lodi, Cass Co., Wm. R. Meyer A-166	5.0	2.4	1							4.0			
Cabot Corp.—Carson Co., 4-5-I&GN	20.0	12.0	7							47.5			
Estes, Ward Co., 3-16 Univ. Land	11.5	11.1	7							61.2			
Kingsmill, Gray Co., 152-3-I&GN	24.4	16.0	7							91.0			
Walton, Winkler Co., 11-26 PSL	33.5	31.8	7							98.0			
Cal Gas Corp.—Strawn, Tom Green Co., 6 mi s													
of Christoval Hwy 277	5.5	2.5	6						18.8				
Champlin Petroleum Co.—Conroe, Montgomery													
Co.	65.0	47.8	7							98.5			
East Texas, Panola Co.	260.0	254.6	7	183.5	93.6		77.8			160.1			
Gulf Plains, Nueces	135.0	112.6	7	120.4	52.0		33.9			77.7			
Lyons 1 & 2, Burleson Co.	20.0	10.6	3							41.5			
Tunis, Burleson Co.	10.0	3.8	3							12.5			
Chevron USA Inc.—Kermit, Winkler Co., 12-B3													
PSL	50.0	9.4	2		9.0		4.6				¹¹ 4.6		
North Snyder, Scurry Co., 440-97 H&TC RR ..	46.0	29.2	2		21.6		22.6		90.8	30.5	¹¹ 57.4		
Sherman, Grayson Co., A-121 Uniah Burns ..	33.0	16.2	2		10.8			10.2		6.5			
Cities Service Co.—Chico, Wise Co., CH&HRR													
A-384	65.0	73.1	2	71.9	131.3	9.6	45.9			48.7			
Corpus Bay, San Patricio Co., Lot A Gregory													
subdiv. Geronimo Valdez A-296	75.0	31.9	2	24.0	20.0	9.0	5.7			9.6			
East Texas, Gregg Co., William Castleberry													
A-33	27.0	19.1	3&7	46.2	75.6		55.3			40.6			
*Ector Co., T&PRR 44-2s	4.0	2.3	7							5.1			
Lefors, Gray Co., 2-1-AC&1&13	11.6	8.2	7							69.7			
May, Kleberg Co., 12-5 first subdiv. of Riviera													
Lands	50.0	3.7	2						4.2				
Mont Belvieu fractionation, Chambers Co.,													
Henry Griffin, League A-12			†	(1,299.7)	(967.9)	(149.5)	(391.3)			(461.5)			
Myrtle Springs, Van Zandt Co., J. Saingva													
A-76 s	30.0	8.6	2		5.6		6.2			3.9			
*Pampa, Gray Co., 133&136 IGRR	50.0	5.0	2						91.4		¹¹ 34.2		
Panola Co., Matthew Parker A-527	100.0	16.5	2		7.6	3.3	3.2				¹¹ 8.8		
*Roberts Ranch, Midland Co., 16-43-3s													
T&PRR	85.0	62.5	7						194.4				
Robstown, Nueces Co., Simmons & Perry's													
subdiv. of Ellifer Tract	65.0	9.8	2	10.8	2.6	1.2	1.1			3.8			
San Antonio Bay, Calhoun Co., Lot II Miguel													
Castillo A-7	12.4	1.6	2	1.7	0.7	0.5	0.4			0.5			
Stonewall Co., E. Borden, A-831	20.0	3.9	2		16.8		8.8			7.2			
Welch, Dawson Co., 67-M of EL&RRRR	2.5	1.3	2							15.0			
*West Seminole, Gaines Co., 355 G													
CCDS&RGH GRR	40.0	21.4	2							78.6			
West World, Crockett Co., 19-Q-GCSFRR ..	15.0	1.9	2							7.1			
Coates, George H. Estate of—Jay Simmons,													
Starr Co., San Jose Grant	5.0	2.0	2					3.5	2.0				
Colorado Interstate Gas Co.—Bivins, Moore Co.,													
33-PMC EL&RR	165.0	61.0	2						122.6				
Conoco Inc.—Chittim, Maverick Co., N.J.													
Chittim Ranch	5.0	2.0	3		4.6		4.8			1.9	¹¹ 1.9		
Hamlin, Fisher Co., H&TC B-1	20.0	7.4	3				48.7						
Port, Jefferson Co., 14-10-RL	175.0	19.9	2		3.7		2.6			1.6	¹¹ 0.2		
Ramsey, Reeves Co., 36-38-1	10.0	2.0	3		1.6		1.6			1.8			
Rincon, Starr Co., 485, CCSD, R6N6RR	33.0	9.8	5		3.7		3.1			4.9			
CRA Inc.—Bailey, Schleicher Co., 522-TT ..	15.0	10.0	7							50.0			
Eldorado, Schleicher-Iron-Reagan Cos., 33-													
M-GH&SA	30.0	20.0	7							100.0			
Mertzon, Schleicher-Iron-Tom Green Cos.,													
Tom Green CSL-1	30.0	20.0	7							100.0			
Quitman, Wood Co., S.G. Purse A-456	10.0	2.8	2							15.0			
Dalco Services Inc.—Aspermont, Stonewall Co.,													
ne4-222-H&TC RR-D	0.5	0.3	3							1.5			
Davis, J. L.—Big Lake, Reagan Co., 8 miles e of													
Big Lake	8.0	7.0	2							35.0			
Bowie, Montague Co., 3 miles ne of Bowie ..	6.0	3.0	3		4.0					5.0			
Iron, Iron Co., 8 miles n of Barnhart	16.0	12.0	2							66.0			
Ozona, Crockett Co., 13 miles sw of Ozona ..	4.0	3.0	3							6.0			
Stiles, Reagan Co., 5 miles nw of Texon	6.0	5.0	2							30.0			
Delta Drilling Co.—Ozona, Crockett Co.,													
ne1/4-LMN GC&SFRR	60.0	38.5	2		50.0		30.0				¹¹ 38.6		
Diamond Shamrock Corp.—McKee, Moore Co.,													
399-44 H&TC	375.0	290.0	2&7		259.5	61.9	105.9			108.8	¹¹ 443.4		
Dorchester Gas Producing Co.—Cargay, Carson													
Co., 46-4-I&GN, White Deer	30.0	29.0	7	38.6	33.1	6.2	14.8				¹¹ 17.2		

Company, plant, location	MMcfd			Production—1,000 gal/day (Average based on the past 12 months)								Other
	Gas capacity	Gas throughput	Process method	Ethane	Prop.	Isobut.	Normal or unsplit butane	LP-gas mix	Raw NGL mix	Debut. nat. gas		
Sterling Co., 10-22-H&TC	40.0	26.0	6						69.4			
Texon, Reagan Co., 12-2 Univ. Land	5.0	2.0	3	0.2	3.1		2.7		2.7			
Woodlawn, Marian-Harrison Co., L. Watkins	100.0	20.0	1	3.0	5.0		4.2			14.2		
Eagle Petroleum Corp.—Holiday No. 2, Archer Co.	1.5	0.9	3	0.9	1.1	0.1	0.4			0.4		
KMA, Wichita Co., Rocky Point near Electra	5.0	0.9	3	0.2	0.4	0.1	0.3			0.3		
El Paso Natural Gas Co.—Jack Herbert, Upton Co., 102-D CCS D&RG NE RRC	10.0	1.8	5							110.4		
Midkiff, Reagan Co., nw4&n2-sw4-22 T&PRR 37-5-5	168.0	74.0	1		73.6		88.6			72.6		
Puckett, Pecos Co., n2-n2-ne4-13-126 T&St.L RR	75.0	33.1	5							110.2		
Santa Rosa, Pecos Co., Port S/2-105-B U&GRR	30.0	17.9	2						31.4			
Sealy Smith, Ward Co., nw4-43-A	17.0	12.2	4						2.0			
Wilshire, Upton Co., e2-ne4-ne4&se4-se4-ne4 135-E CCS D&RG NGR	30.0	11.7	4							112.4		
Enserch Exploration Inc.—Carlsbad, Tom Green Co., Mason & Perry, subdiv of Collyns Ranch	4.0	4.6	3						4.0			
Decatur, Wise Co., David Moses A-357	18.0	13.7	7						42.9			
Gilliland, Knox Co., C of H&TC RR	14.0	13.4	3						8.8			
Gordon, Palo Pinto Co., Thomas Reed A-384	50.0	39.6	7						149.3			
Madisonville, Madison Co., Alfred Gee A-16	20.0	13.0	5						1.7			
Needville, Fort Bend Co., Patrick H. Durst A-166	96.0	36.0	1						8.3			
Pueblo, Eastland Co., SPRR-464	20.0	18.8	7						80.1			
Ranger, Eastland Co., H&TC RR 4-4	7.0	4.4	2						14.4			
Red Oak, Leon Co., A. T. Kerr A-455	10.0	4.0	5						0.5			
Sonora, Sutton Co., D. H. Corbin 6-JK, A-1437 and A-1433	90.0	19.8	7						19.0			
Springtown, Parker Co., J. L. Hodges A-690	80.0	84.2	7						317.4			
Trinidad, Henderson Co., No. Addison A-17	65.0	68.0	7						120.0			
Weatherford, Parker Co., A. Bielese A-2732	30.0	19.1	7						84.7			
Etexas Producers Gas Co.—Smith Co., Stillwell Box A-169	6.5	4.0	1					4.0		4.0		
Exxon Co.—Anahuac, Chambers Co., H&TCRR, 51 A-112	290.0	164.3	2	42.7	26.6	8.7	8.6			21.1		
Clear Lake, Harris Co., James Lindsey	220.0	145.8	2	61.9	37.7	11.6	10.6			23.2		
Conroe, Montgomery Co., Random House	120.0	105.0	7	45.7	40.2	10.9	17.6			37.7		
East Texas, Rusk, T. J. Martin	25.0	9.9	2	19.2	52.4	12.1	28.4			28.2		
Hawkins, Wood Co., H. Watson	150.0	125.6	7	24.9	68.4	30.8	42.3			80.0		
Heyser, Calhoun Co., Agaton Sisneros A-36	22.0	21.5	5							6.5		
Jourdanton, Atascosa, Edward Estes	26.0	17.0	1		1.2		2.4			3.1		
Katy, Waller Co., T. S. Reese 110, A-332	1,260.0	684.1	2	537.1	160.7	41.0	44.9			160.4		
Kellers Bay, Calhoun Co., N. Covassos League A-2	43.0	58.0	2						6.4			
Kelsey, Brooks Co., La Blanca A-459	250.0	50.5	2						88.7			
King Ranch, Kleberg Co., R. King A-172	2,650.0	1,164.0	1&2	168.4	162.7	69.7	62.5			10249.4		
Ne Loma Novia, Duval Co., J. Poitevent 213 A-923	35.0	5.8	2						9.5			
Neches, Cherokee Co., J. H. Shaw	40.0	26.8	2	2.7	29.4	6.1	15.4			20.5		
Pyote, Ward Co., 32-16 ULS	100.0	61.0	7						97.9			
Sand Hills, Crane Co., 18-32 PSL	65.0	59.0	7						211.0			
Santa Fe, Brooks Co., San Salvador del Tule A-290	15.0	6.7	2						8.0			
Sarita, Kenedy Co., J. A. Balli A-2	180.0	39.3	7						55.5			
Thompson, Fort Bend Co., John Rabb	40.0	31.3	7	1.7	5.6	1.0	2.0			4.2		
Tomball, Harris Co., C. Goodrich	80.0	56.0	2	20.1	12.0	3.3	4.3			14.2		
Tom O'Connor, Refugio Co., Maria Jimenes A-324	235.0	149.0	1		17.3		22.7			48.2		
Gerlane Petroleum Co.—Mobeetie, Wheeler Co., 1 mile w of Mobeetie	12.0	4.0	2						8.0			
Getty Oil Co.—East Vealmoor, Howard Co., 20-27-H&TC	55.0	39.6	2		98.9	17.6	60.4		56.0	171.7		
El Paso, Carson Co., 88-4 I&GN RR	150.0	107.0	2						10.6			
Headlee, Ector-Midland Co., e half nw¼ 8-41-2s T&PRR Co.	15.0	3.0	1						16.5			
*Headlee Devonian, Ector-Midland Co., ne¼ of nw¼ 29-41-2s T&PRR	210.0	200.0	7						600.6			
Kingsmill, Gray Co., 174-3 I&GN RR	25.0	11.0	2						40.1			
New Hope, Franklin Co., Isaac Barre A-20	50.0	35.0	1		11.4		13.5			6.7		
Normanna, Bee Co., Thomas Duty A-21	32.0	8.0	2				1.4			1.1		
Schafer, Carson Co., 88-4 I&GN RR	30.0	21.3	1		38.0	9.3	23.1			33.7		
Spearman, Ochiltree Co., 23-R-B&B	50.0	49.1	2		14.6				17.2			
Watkins, Hutchinson Co., 13-21 T&C RR	20.0	7.1	1						52.4			
West Bernard, Wharton Co., J. M. Rose Heirs A-322	30.0	8.0	1		1.1		2.1			3.6		
Gulf Energy & Development Corp.—Palo Pinto Co., 14 miles s of Mineral Wells, Tex.	15.0	12.0	7						46.0			
Rio Grande City, Starr Co., 10 miles n of Rio Grande City	37.0	37.0	2		2.0		2.5			2.3		
Runge, Karnes Co., 8 miles s of Runge	50.0	32.0	2	23.4	20.0	5.4	8.0			8.5		
HNG Petrochemicals Inc.—Bammel, Harris Co., HT&BRA A-420	100.0	30.0	2	32.0	9.2		3.4			3.2		
Gregory, San Patricio Co., Geranimo Valdez A-269	70.0	32.0	2		21.0		14.0					
Liverpool, Brazoria Co., Day Lane & Cattle Co., A-601	42.0	12.0	2						8.5			
Loma Blanca, Brooks Co., Loma Blanca Grant F. G. Chapa A-98	35.0	5.0	2				7.0					
Robstown, Nueces Co., Mathis Garcia A-116	76.0	76.0	2	12.0	27.0		29.0			13.0		
Sonora, Sutton Co., HE&WT RR A-352	50.0	50.0	2						74.0			
Tuleta, Bee Co., Brooks & Burleson	40.0	16.0	1				12.3			11.0		
Victoria Co., James Reed A-236	75.0	30.0	2				20.0					

Company, plant, location	MMcfd		Process method	Production—1,000 gal/day (Average based on the past 12 months)							
	Gas capacity	Gas throughput		Ethane	Prop.	Isobut.	Normal or unsplit butane	LP-gas mix	Raw NGL mix	Debut. nat. gas	Other
Houston Oil & Minerals Corp.—Giddings, Lee Co., J. Vashary League A-329	5.0	3.5	3						10.6		
Madisonville, Madison Co., John Talbert A-30	1.0	0.8	4						1.2		
Smith Point, Chambers Co., E. T. Branch A-40	105.0	105.0	5							8.8	
South Liberty, Liberty So., E. Munson League A-88	18.0	11.0	3						2.3		
Texas City Dike, Galveston Co., T. G. Western A-204	50.0	35.0	7						24.7		\$47.8
Hunt, H. L. Estate—Pecos Valley, Pecos Co., 106-T&ST. L	10.0	3.0	3					3.0			
Hunt Industries—Zoller, Refugio Co., J. Benson	30.0	6.0	2						10.0		
Hunt Oil Co.—Fairway, Henderson Co., Jose Mora A-497	87.5	60.0	2						160.0		
Kerr-McGee Corp.—Hobart Ranch, Hemphill Co., 70 A-2	43.5	NR	7						107.0		\$18.0
Pampa, Gray Co., 5163 B-3 I&GN	24.0	NR	2						41.6		
Koch Hydrocarbon Co.—Sterling Co., 141-2 H&TC RA	5.0	2.3	3						8.6		
Ladd Petroleum Corp.—Ozona, Crockett Co., 2-2 I&GN RR	26.0	14.5	2						59.8		
Liquid Products Recovery Inc.—East Ramsey, Colorado Co.	15.0	4.0	3						3.0		
Mapco Inc.—Westpan 950, Hutchinson Co., 92-Y2-TTRR	50.0	51.5	2						186.7		
Westpan 1000, Hutchinson Co., 92-Y2 TTRR	145.0	52.9	2						133.0		
Marathon Oil Co.—Markham, Matagorda Co., 4-9-9	165.0	80.5	2					37.4			
Susan Peak, Tom Green Co., 193 SP RR-11	3.3	3.3	3		2.8			3.2			
Welder, San Patricio Co., 49 Robert Montgomery 199 and Ewan Cameron A-97	55.0	16.2	1					3.8			
Yates, Pecos Co., I. G. Yates, 194 SF 1234-1	25.0	19.0	2		4.3			27.1			
Matrix Land Co.—Box Elmdale, Callahan Co., 4 miles e of Abilene	4.0	2.0	3						6.0		
Tuscola, Taylor Co., 2 miles w of Tuscola	1.5	1.5	3						1.5		
Mills Bennett Estate—Brooks Co., 15 miles sw of Falfurrias	NR	1.0	2					0.9			
Mitchell Energy & Development Corp.—Barton Chapel, Jack Co.	15.0	14.4	7						46.6		\$2.3
Bridgeport, Wise Co.	203.0	140.8	2		151.6	22.1	44.9		244.3	75.7	\$21.2
Brownwood, Brown Co.	15.0	7.2	7						36.6		
Cherry, Fayette Co.	5.0	0.1	3						0.6		
Cisco, Eastland Co.	15.0	17.7	7						57.6		\$2.5
Crockett Co.	5.0	0.9	6						1.5		
Devils River, Sutton Co.	5.0	1.6	3						2.2		
Galveston Co.	15.0	7.7	7					10.4			
Gibtown, Jack Co.	15.0	13.8	7						53.2		\$1.6
Huckabay No. 1, Erath Co.	15.0	15.0	7						57.8		\$0.7
Huckabay No. 2, Erath Co.	15.0	15.0	7						57.8		\$0.7
LaSal Vieja, Willacy Co.	15.0	5.1	7						8.5		
Live Oak Co.	20.0	10.8	7						27.5		
Lone Camp No. 1, Palo Pinto	10.0	NR	2								
Lone Camp No. 2, Palo Pinto	10.0	12.7	7						44.4		\$0.4
Lone Camp No. 3, Palo Pinto	10.0	12.7	7						44.4		\$0.4
Lone Camp No. 4, Palo Pinto	30.0	22.2	7						78.1		\$0.7
Mesquite Bay, Aransas	10.0	1.8	6						4.9		
Mineral Wells, Palo Pinto Co.	15.0	15.4	7						61.7		\$1.4
Morgan Mill No. 1, Erath	15.0	12.5	7						39.1		\$0.7
Morgan Mill No. 2, Erath	15.0	12.5	7						39.1		\$0.7
Pirates Cove, Galveston	35.0	25.8	7						20.1		
Ponder, Denton	2.0	2.7	6						7.3		\$0.1
Ranger No. 1, Eastland	5.0	NR	7								
Ranger No. 2, Eastland	10.0	6.7	7						27.5		\$0.9
Seven Oaks, Polk	20.0	13.2	2						28.4		
Springtown, Parker Co.	15.0	12.3	7						35.6		\$0.1
Sutton Co.	10.0	3.9	7						15.5		\$0.4
Taylor No. 1, Fayette	20.0	4.9	3						6.2		
Tom Walsh, Webb Co.	10.0	5.5	7						10.1		
Winnie, Jefferson Co.	75.0	53.0	7						51.7		
Mobil Producing Texas & New Mexico Inc.—Canadian, Hemphill Co., ne cor of David Crockett	55.0	21.0	7						45.8		
*Coyanosa, Pecos Co., 48-OW TTRR	300.0	138.0	2&7						202.1		
Desdemona, Eastland Co., J.W. Carruth Farm, W.H. Funderburg A-139	1.3	0.9	3					1.6		6.5	
Electra, Wilbarger Co., 17-13 H&TC RR	1.4	0.8	3					6.5	5.7		
Hagist, Duval Co., BS&F 267	70.0	28.0	1						32.1		
LaGloria, Jim Wells Co., 9-3 Rageland 7 Herring subdiv, LaGloria Townsite subdiv.	320.0	145.0	7	126.1	60.3	18.2					\$26.2
*Pegasus, Midland Co., e2-30-40-45T&PRR	94.0	88.0	7	51.8					210.1		\$1.9
Salt Creek, Kent Co., W&NW RR G-193	28.0	15.0	2						182.4		
Seeligson, Jim Wells Co., Los Jabonillos Grant-Antonio											
Ramirez	320.0	140.0	7	84.3	33.6	10.7	8.7			38.4	\$4.2
Vanderbilt, Jackson Co., R. Musquex A-59	95.0	121.0	2&5								\$13.6 \$1.0 25.7

Company, plant, location	MMcfd			Production—1,000 gal/day (Average based on the past 12 months)							
	Gas capacity	Gas throughput	Process method	Ethane	Prop.	Isobut.	Normal or unsplit butane	LP-gas mix	Raw NGL mix	Debut. nat. gaso.	Other
Waha, Pecos Co., 5-C3 PSL	175.0	111.0	7	....	....	....	....	....	180.0	....	....
Wilcox, Lavaca Co., J.R. Ragsdale	255.0	76.0	2	24.6	30.8	....	14.6	....	....	15.8	....
A-377	40.0	17.0	3	60.0	75.0	....	38.0	....	30.0	....	....
Monsanto Co.—Diamond M, Scurry Co., se¼	240.0	155.0	5	....	....	....	....	....	16.0	....	....
182 H&TC	240.0	91.0	5	....	....	....	....	....	70.8	....	....
Natural Gas Pipeline Co. of America—	....	....	....	....	....	....	....	....	....	....	....
*PP 161, Hutchinson Co., 5-Y2-TTRR	....	....	....	....	....	....	....	....	....	....	....
*PP 162, Moore Co., 1-TTRR	....	....	....	....	....	....	....	....	....	....	....
Northern Gas Products—Barnhart, Reagan Co.	....	....	....	....	....	....	....	....	....	....	....
3-48 Univ. Lands	4.0	NR	3	0.3	0.4	0.1	0.2	....	....	0.2	....
Lipan, Hood Co., J.R. Anderson A-11	15.0	6.4	6&7	....	....	....	....	....	26.1	....	....
Martin Co. No. 1, 31-37-2n 17PR	10.0	4.1	3	....	....	....	....	23.4	....	....	....
Martin Co. No. 2 4-HA	5.0	2.0	3	....	....	....	....	....	11.7	....	....
Odessa Natural Corp.—Foster, Ector Co.	....	....	....	....	....	....	....	....	....	....	....
18-42-25 T&PRR	146.0	146.0	7	....	28.9	....	28.1	....	25.1	....	85.8
W.D. Noel, Eastland Co., 31-3 H&TC RR	30.0	30.0	7	....	....	....	....	....	150.0	....	....
Palo Pinto Oil Co.—Markley, Jack	....	....	....	....	....	....	....	....	....	....	....
Co., SPRR A-583	4.0	1.0	3	....	....	....	....	....	3.1	....	....
Parade Co.—Giles, Rusk Co.	7.5	1.7	1&4	....	7.9	....	....	....	15.1	....	....
Permian Corp.—Alba, Wood Co., Lat 32°	....	....	....	....	....	....	....	....	....	....	....
46°52' Long, 95° 37'8"	2.0	1.0	4	....	....	....	....	4.3	10.8	....	....
Possum Kingdom, Stephens Co., E.	....	....	....	....	....	....	....	....	....	....	....
Romerhausen A-149	5.0	1.5	3	....	....	....	....	3.9	1.0	....	....
Todd, Crockett, 28-WX GC&SF	5.0	2.0	3	....	....	....	....	10.9	0.7	....	....
Perry Gas Processors Inc.—Barstow,	....	....	....	....	....	....	....	....	....	....	....
Pecos Co., 154-34	25.0	5.0	5	....	....	....	....	....	....	....	....
Dimmit Co., 478 A-605-479 A-66	....	....	....	....	....	....	....	....	....	....	....
480 A-709-481 A-667	10.0	4.0	1	....	....	....	....	....	....	....	....
Fl Dorado, Schleicher, 7-A	5.0	3.0	1	....	....	....	....	....	....	....	....
Hemphill Co.	35.0	14.0	5	....	....	....	....	....	....	....	....
Hokit, Pecos Co., 1-7	15.0	4.0	5	....	....	....	....	....	....	....	....
LaSalle Co.	5.0	3.0	1	....	....	....	....	....	....	....	....
Pyote Devonian, Ward Co., 31-16	225.0	120.0	1	....	....	....	....	....	....	....	....
Pyote Ellenberger, Ward Co., 31-16	40.0	38.0	1	....	....	....	....	....	....	....	....
Rosita, Duval Co.	35.0	30.0	1	....	....	....	....	....	....	....	....
Thompsonville, Jim Hogg Co.	30.0	8.0	5	....	....	....	....	....	....	....	....
Zapata Co.	10.0	4.5	5	....	....	....	....	....	....	....	....
Petroleum Corp. of Texas—Ibex, Shackelford	....	....	....	....	....	....	....	....	....	....	....
Co., nw 28 Bal Shackelford Co.	10.0	6.0	1	....	10.4	....	....	....	10.5	....	....
South Bend, Young Co., J. Garrett	8.0	6.0	1	....	12.2	....	....	....	14.6	....	....
PGP Gas Products Inc.—Imperial, Crane, Co.,	....	....	....	....	....	....	....	....	....	....	....
s2-20-3 H&TC RR-1	NR	14.0	7	....	....	....	....	....	52.1	....	....
Perry-LaGrange, Fayette Co., Wm. Rabb 3	....	....	....	....	....	....	....	....	....	....	....
League A-86	NR	56.6	7	....	....	....	....	....	138.0	....	....
Phillips Petroleum Co.—Andrews Co.,	....	....	....	....	....	....	....	....	....	....	....
w2 nw4-19 A-46 PSL	115.0	NR	2	....	....	....	....	....	....	....	....
Benedum, Upton Co., w2-se4-46-1 MK&T	85.0	NR	7	....	....	....	....	....	....	....	....
Brazoria Co., nw4-5-H&B A-221	55.0	NR	7	....	....	....	....	....	....	....	....
Crane Co., ne4-216-F CCSD&RGNG RR	20.0	NR	6	....	....	....	....	....	....	....	....
Dumas, Moore Co., nw4-181-44 H&TC	120.0	NR	7	....	....	....	....	....	....	....	....
Fullerton, Andrews Co., Center	....	....	....	....	....	....	....	....	....	....	....
S-17 A-32 PSL	55.0	NR	7	....	....	....	....	....	....	....	....
Giddings, Fayette Co., David G. Green A-193	75.0	NR	7	....	....	....	....	....	....	....	....
Goldsmith, Ector Co., nw4-se4-33-44	....	....	....	....	....	....	....	....	....	....	....
T&P-1n	370.0	NR	7	....	....	....	....	....	....	....	....
Gray Co., e2-32-2 H&GN	74.0	NR	2	....	....	....	....	....	....	....	....
Hansford Co., 7&B-1 PSL	170.0	NR	1	....	....	....	....	....	....	....	....
Henderson, Rusk Co., sw portion A.H.	....	....	....	....	....	....	....	....	....	....	....
Crain-Anderson Tract	20.0	NR	1	....	....	....	....	....	....	....	....
Luling, Caldwell Co., north corner John Henry	....	....	....	....	....	....	....	....	....	....	....
A-12	12.0	NR	7	....	....	....	....	....	....	....	....
Pantex, Hutchinson Co., 8&9 M. Whitley	20.5	NR	7	....	....	....	....	....	....	....	....
Puckett, Pecos Co., n2-26-101 TCRR	250.0	NR	5	....	....	....	....	....	....	....	....
Rock Creek, Hutchinson Co., nw4-22-y A&B	180.0	NR	7	....	....	....	....	....	....	....	....
Sanford, Hutchinson Co., s2-n2-w2-s2-82-46	....	....	....	....	....	....	....	....	....	....	....
H&TC	150	NR	1	....	....	....	....	....	....	....	....
Sherman, Hansford Co., 7&B-1 PSL	340.0	NR	7	....	....	....	....	....	....	....	....
Sneed, Moore Co., w2-nw4 Freeman	....	....	....	....	....	....	....	....	....	....	....
Brazemore	250.0	NR	1	....	....	....	....	....	....	....	....
Spraberry, Midland Co., se4-25-3s-37 T&P	25.0	NR	7	....	....	....	....	....	....	....	....
Phillips, Jack L.—Nan Su Gail, Freestone Co.	7.0	0.5	3	0.4	0.5	0.2	0.3	....	....	0.4	....
Pioneer Gas Products Co.—Arrington, Hemphill	....	....	....	....	....	....	....	....	....	....	....
Co., A-2-52	40.0	35.8	2	....	....	....	....	35.9	....	....	....
E. Goldsmith, Ector Co., 34-34	50.0	8.9	2&7	....	....	....	....	28.0	....	3.0	....
Fain, Potter Co., G&M 10-181B	130.0	69.8	2	....	49.5	....	55.7	....	....	40.6	....
Pamoa, Gray Co., H&GN 96-82	60.0	8.6	2	....	12.4	....	....	....	15.0	....	....
Turkey Creek, Potter Co., G&M 36-M-2	100.0	38.8	2	....	34.4	....	33.4	....	....	27.1	....
Pronto Gas Co.—Cope, Coleman Co.	1.0	0.5	3	....	....	....	....	....	0.5	....	....
Miles, Runnels Co.	2.0	0.5	3	....	....	....	....	....	1.0	....	....
Novice, Coleman Co.	2.0	1.0	3	....	....	....	....	....	1.0	....	....
San Angelo, Tom Green Co.	2.0	1.0	3	....	....	....	....	....	2.5	....	....
Sweetwater, Nolan Co.	0.5	0.2	3	....	....	....	....	....	2.0	....	....
Shell Oil Co.—Bryans Mill, Cass Co., B.F. Lynn	....	....	....	....	....	....	....	....	....	....	....
A-651	70.0	57.5	2	....	33.6	....	....	....	53.9	....	189.1
Conley, Hardeman Co., 80-H W&HWRR	6.0	1.1	3	....	2.9	....	1.2	....	....	1.1	....
Eustace, Henderson Co.	70.0	20.0	7	40.0	22.0	5.0	9.0	....	....	4.0	16.0
Houston Central, Colorado Co., F. Mayhar	....	....	....	....	....	....	....	....	....	....	....
A-400 K. Winn A-589	285.0	130.0	2	127.1	84.9	20.4	25.9	....	....	39.9	46.8
Ozona, Crockett Co., 46-OP GC&SFRR	10.0	6.1	3	....	....	....	11.9	....	....	4.9	....
Persson, Karnes Co., Jesus Hernandez, A-140	54.0	18.0	2	....	10.0	....	7.3	....	....	7.8	12.1
Tippett, Crockett Co., 28-31-H&TCRR	35.0	29.1	6	44.3	28.3	....	....	....	30.2	....	....
TXL, Ector Co., 17-45-1s T&PRR	40.0	28.0	2	49.6	55.9	....	24.9	....	....	22.4	....
Wasson, Yoakum Co., 827&802-D John	....	....	....	....	....	....	....	....	....	....	....
Gibson	175.0	115.0	1-2	214.5	338.0	....	....	....	379.5	....	....

Company, plant, location	MMcfd			Production—1,000 gal/day (Average based on the past 12 months)							
	Gas capacity	Gas through-put	Process method	Ethane	Prop.	Isobut.	Normal or unsplit butane	LP-gas mix	Raw NGL mix	Debut. nat. gaso.	Other
Sid Richardson Carbon & Gasoline Co.—Chalk,											
Cottle Co., C.L. Carter FP 4480	15.0	10.0	3					24.0			
Eskota, Fisher Co., 11 T&PRR-19	12.0	7.0	6					48.0			
Halley, Winkler Co., 22-B11-PSL	60.0	64.0	7					200.0			
*Keystone, Winkler Co., 5-B2-PSL	125.0	95.0	7					245.0			
Sterling Co., 2-31-5a T&PRR	50.0	32.0	7					140.0			
Southwest Forest Gas Plant—Rocker B, Reagan											
Co., 17 miles ne Big Lake	16.0	8.0	7						42.0		
Suburban Propane Exploration Co.—Martha F.											
Berry, Frio Co., M.C. Patton, 1178 A-542	22.0	4.3	2		3.0		2.3			1.8	
Sun Gas Co.—*Big Wells, Dimmitt Co., I&GN											
A-223 82-1	20.0	13.2	2		15.2		13.0			6.9	
Concho Co., 153-72-T&N	10.0	2.3	2		4.4				1.9		
Jameson, Coke Co., 315-1A N&TCRR	50.0	52.0	2	87.2	100.5		49.7			35.1	
Kurten, Braxos Co., James Simpson A-208	35.0	7.0	2						21.1		
Luby, Nueces Co., 9-G Part Petronilla Ranch	10.0	6.5	2					3.2		1.8	12.4
Red Fish Bay, San Patricio Co., R.W.											
Williamson	140.0	26.5	2					19.2		7.7	
Snyder, Scurry Co., 16-1 J.P. Smith	150.0	65.5	3		167.1	29.7	81.1	431.5		95.2	
Sun, Starr Co., 239 AB-225 CCSdr Rqn Grr	92.0	66.5	2		26.3		17.3			28.0	20.8
Tijerina-Canales, Jim Wells Co.,											10.1
343 CCSD&RGNG	75.0	20.6	2		11.6		9.0			2.4	13.0
Victoria Co., Felipe Dimmitt A-20	45.0	18.2	2						18.0		
Sun Gas Transmission Co.—Graham, Young Co.,											
TE&L Co., 3412 A-1232	10.0	3.7	3						7.5		
Oliner, Archer Co., S.G. Hardaway, A-164	3.0	1.0	3						5.1		
Sun Production—Shamburger Lake, Smith Co.,											
Milton H. White	1.0	0.1	3					3.7			
Superior Oil Co.—Portilla, San Patricio, J.											
Francisco, E. Portilla A-53	15.0	13.7	2						17.9		
Tenneco Oil Co.—Chesterville, Colorado Co.,											
Thomson A-708	55.0	18.8	2		13.6	3.6	4.4			5.7	
Leabo, Matagorda Co., sw 1/4-17 Rynd Lander											
A-351	95.0	8.4	2						10.6		
Ward, Hidalgo Co., Porcion 68, Gregario											
Comancho A-28	140.0	32.7	2		7.8		6.2			10.8	0.8
Texaco Inc.—Blessing, Matagorda 59-C, J.E.											
Pierce sub H&GN	65.0	NR	2		20.0		15.0		47.3		
Encinitas, Brooks Co., nw 14 San Antonio											
Grant A-214	17.0	NR	2		24.0						
Fuller, Scurry Co., 642-97 H&TCRR	58.0	NR	2		58.0		46.0		227.5	59.0	
Handy, Grayson Co., se 4-A-1441 IG&NRR	10.0	NR	2						48.6		
Humble, Harrison Co., J.B. Stevenson Fee											
A-703 B-4	4.0	NR	6						14.0		
Lamesa, Dawson Co., 36-34-5n T&PRR	6.0	NR	3		10.0				15.0		
Lockridge, Ward Co., 101-34 H&TCRR	47.5	NR	2						21.1		
Mabee, Andrews Co., 32-40-21 39-2n	20.0	NR	2						104.4		
Ozona, Crockett, 3-MNGC&SE RR	25.0	NR	7						96.0		
South Kermit, Winkler Co., 22-22 B-3PSL	35.0	NR	2		7.3				33.0		
Tijerina, Jim Wells Co., A. Canales 300 A-79	35.0	NR	2				9.3				36.0
Texas Oil & Gas Corp.—Coyanosa, Pecos Co.,											
18-154-T&SL RR	100.0	75.0	7						178.0		12.0
Denton Co., BBB&CRR A-161	30.0	7.0	2						20.0		
East Texas, Marion Co., John H. Kernels											
A-236	90.0	75.0	7		33.0	28.0	20.0			110.4	
Grapeland, Houston Co., 2JDI Procella											
League A-69	150.0	126.0	7						120.0		
La Paloma, Kenedy Co., Santa Rosa de Arriba											
Pedro de la Garza A-35	20.0	17.0	7						27.0		
Laredo, Webb Co., Por. 14 of N.D. Machas											
Estate	30.0	18.0	2					18.0		6.0	
Live Oak Co., Refugio CSL A-398	6.0	6.0	3						4.5		
Longview, Gregg Co.	100.0	70.0	7						36.0		82.0
Shackelford, Callahan Co., nw corner 24 sw											
corner 23 Bayland Orphan Home Land	30.0	24.0	2						57.0		113.5
Tipperary Corp.—Claytonville, Fisher Co.,											
211-3 H&TC RR	18.0	5.0	2						40.0		
Peach Creek, Lavaca Co.	12.0	4.0	7						8.0		
Pearsall, Frio Co., 1-A-307 Henry Castro	8.0	4.5	3						18.5		
Union Oil Co. of California—Bakke, Andrews											
Co., 20-A44-PSL	19.0	3.0	2						20.9		
Dollarhide, Andrews Co., 25-A52-PSL	13.0	7.4	6						36.7		
*Fort Trinidad, Houston Co., RCS A-23	40.0	7.0	2	9.3	7.4					6.6	
Van, Van Zandt Co., JWS A-891	15.0	8.8	2		11.3		15.8			14.8	
Union Texas Petroleum Corp.—Benedum,											
Upton Co.	55.0	18.0	2						84.8		
Perkins, Coke Co.	25.0	20.0	7						126.7		
Walnut Bend, Grayson Co.	28.0	6.0	7						34.8		
Wellman, Terry Co.	5.5	4.0	7						15.4		
United Texas Transmission Co.—Galveston,											
Chambers Co., J. Armstrong A-2	40.0	9.0	7						8.8		110.6
Upham Oil & Gas Co.—Bridgeport, Wise Co.,											
Wm. Hersee	10.0	3.6	2		7.4		4.7			3.6	
Valero Hydrocarbons Co.—Armstrong, DeWitt											
Co.	200.0	170.0	267	117.7			183.7				
Gadren City, Sterling Co.	70.0	54.5	7	89.4							
Freer, Webb Co.	140.0	58.4	2	61.5							
Hidalgo Co.	60.0	11.1	2	9.3							
Mission, Hidalgo Co.	30.0	18.0	2	7.1							
San Antonio, Bexar Co.	180.0	96.2	7	25.1							
*Shoup, Nueces Co.	250.0	180.0	7	84.2	94.6			54.4			
Warren Petroleum Co.—Azalea, Midland Co.,											
2-38-3s	NR	8.0	2						42.0		
Breckenridge, Stephens Co., n2-22 LAL	NR	6.0	3						36.0		

Company, plant, location	MMcfd		Process method	Production—1,000 gal/day (Average based on the past 12 months)							
	Gas capacity	Gas throughput		Ethane	Prop.	Isobut.	Normal or unspl. butane	LP-gas mix	Raw NGL mix	Debut. nat. gaso.	Other
Canada, Hemphill Co., 216 G&MMB&A-C ...	NR	22.0	6	.....	.....	.....	.....	.....	47.0	.....	.....
Como, Hopkins Co., Nacogdoches Univ. A-703	NR	2.0	2	.....	3.0	.....	.....	.....	5.0	.....	.....
Encinal, San Patricio Co., 18 of George H. Paul subdiv of Coleman Fulton Pasture lands	NR	6.0	2	.....	.....	.....	.....	.....	5.0	.....	.....
Fannett, Jefferson CO., Marrs McLean Tract in Wm. H. Smith League A-198	NR	22.0	2	.....	.....	.....	.....	.....	2.0	.....	\$13.0
Fashing, Atascosa and Karnes Cos., Emma Tar H. et al, tract in James Wilkerson 149 A-882	NR	35.0	2	.....	12.0	.....	.....	.....	18.0	.....	.....
Gladewater, Gregg Co., David Ferguson	NR	10.0	7	.....	.....	.....	.....	.....	77.0	.....	\$82.0
Halley, Winkler Co., 90-A G&MMB&A	NR	2.0	7	.....	.....	.....	.....	.....	8.0	.....	.....
La Reforma, Hidalgo Co., San Ramon Juan Farias A-62	NR	4.0	7	.....	.....	.....	.....	.....	5.0	.....	.....
McLean, Wheeler Co., 33-24 H&GN RR	NR	8.0	6	.....	.....	.....	.....	.....	55.0	.....	.....
Monahans, Ward Co., 4-F	NR	24.0	7	.....	.....	.....	.....	.....	78.0	.....	.....
Moore's Orchard, Fort Bend Co., German Emigration No. 8	NR	9.0	2	.....	.....	.....	.....	.....	18.0	.....	.....
North Port Neches, Orange Co., Lillian Pevito tract in John Stephenson A-169	NR	2.0	7	.....	.....	.....	.....	.....	3.0	.....	.....
Sand Hills, Crane Co., 21-PSL- B-21	NR	79.0	2	.....	.....	.....	.....	.....	172.0	.....	.....
Shackelford Co., TE&L 522 & 523	NR	8.0	3	.....	.....	.....	.....	.....	28.0	.....	.....
Spear, Gregg & Rusk Co., Mary Van Winkler	NR	2.0	7	.....	.....	.....	.....	.....	13.0	.....	\$10.0
Terry Co., G-D-14 C&M RR	NR	1.0	7	.....	.....	.....	.....	.....	5.0	.....	.....
Tolar, Hood Co., Lewis Boatright A-33	NR	2.0	7	.....	.....	.....	.....	.....	8.0	.....	.....
Tonkawa, Hemphill Co., 78-41 H&TC RR	NR	3.0	6	.....	.....	.....	.....	.....	4.0	.....	.....
Waddell, Crane and Ector Cos., 25-B-25	NR	70.0	2	.....	22.0	.....	.....	.....	269.0	.....	.....
Worsham, Ward Co., 56-34-H&TC RR	NR	13.0	7	.....	.....	.....	.....	.....	22.0	.....	.....
Wright, Dawson Co., 8-1 J. Poitevent	NR	1.0	3	.....	.....	.....	.....	.....	1.0	.....	.....
WilGas Co.—A&M, Burleson Co., John P. Coles A-12	50.0	60.0	7	.....	.....	.....	.....	.....	12.0	2.0	.....
La Grange, Fayette Co., James Green A-189	15.0	15.0	3	.....	.....	.....	.....	.....	2.0	.....	.....
Total	24,956.8	14,462.9		3,005.4	4,111.2	493.3	2,116.0	1,050.6	10,830.8	2,214.4	2,487.3

† Fractionation. (Figures in parenthesis do not represent primary production, and are not added in state totals). (All figures are capacity).

UTAH

American Quasar Petroleum Co.—Pineview, Summit Co., 3-2n-7e	15.0	9.2	3	.....	26.0	.....	41.8	.....	.....	.....	.....
Champlin Petroleum Co.—Yellow Creek, Summit Co.	80.0	52.2	7	.....	40.7	13.0	15.4	.....	.....	15.4	.....
Chevron USA Inc.—Red Wash, Uintah Co., ne4-21&nw4-22-7s-23e	38.0	10.7	3	.....	.....	.....	.....	.....	.....	3.1	.....
El Paso Natural Gas Co.—Aneth, San Juan Co., nw4-6-41s-24e	100.0	17.2	1	.....	16.4	.....	.....	.....	49.7	20.7	.....
Gary Energy Corp.—Altonah, Duchesne Co., sw-nw5-2s-3w	12.5	1.6	3	.....	1.9	.....	2.5	.....	.....	1.8	.....
Bluebell, Duchesne Co., sw-nw-23-1s-2w	32.0	10.9	2	.....	14.8	.....	.....	.....	23.0	.....	.....
Koch Hydrocarbon Co.—Cedar Rim, Duchesne Co., 21-35-6w	10.0	7.7	2	.....	5.2	.....	4.6	.....	.....	10.1	.....
Mountain Fuel Supply Co.—Chalk Creek, Summit Co., 16-3n-8e	80.0	38.5	.....	.....	.....	.....	6.3	.....	.....	.....	.....
Price, Carbon Co., 8-14s-10e	120.0	97.0	3	.....	.....	.....	4.6	.....	.....	.....	.....
Shell Oil Co.—Altamont, Duchesne Co., 34-1s-4w	40.0	12.0	3	.....	9.3	.....	7.1	.....	.....	24.2	.....
Union Oil Co. of California—Lisbon, San Juan Co., 22-30s-24e	80.0	51.5	3	.....	27.4	.....	18.4	.....	.....	15.7	.....
Total	598.5	308.5		141.7	13.0	89.8	10.9	72.7	91.0	.....	.....

WEST VIRGINIA

Columbia Gas Transmission Corp.—Cobb, Kanawha Co., Big Sandy district	35.0	33.2	2	.....	.....	.....	.....	.....	105.0	.....	.....
Kenova, Wayne Co., Ceredo district	170.0	92.4	2	.....	.....	.....	.....	.....	184.4	.....	.....
Consolidated Gas Supply Corp.—Hastings, Wetzel Co.	150.0	110.0	3	210.0	133.0	22.0	40.0	.....	.....	33.0	.....
Pennzoil Exploration and Production Co.—*13 small plants	13.0	8.6	2&3	.....	.....	.....	.....	.....	3.6	.....	.....
Total	368.0	244.2	210.0	133.0	22.0	40.0	.....	293.0	33.0	.....	.....

WYOMING

American Quasar Petroleum Co.—Spearhead, Converse Co., w2-13-29n-75w	20.0	13.8	2	.....	14.9	.....	18.2	.....	.....	.....	.....
Amoco Production Co.—*Barroil, Sweetwater Co., 7-26n-90w	5.0	2.3	3	.....	2.0	.....	.....	.....	4.9	.....	.....
Beaver Creek, Fremont Co., 10-33n-96w	65.0	35.2	2	11.2	.....	10.0	.....	.....	9.5	.....	.....
Elk basin, Park Co., 29-58n-88w	33.0	16.0	2	.....	10.3	.....	15.9	.....	.....	23.0	.....
Ryckman Creek, Uinta Co., e2-13-17n-119w-6pm	12.0	24.0	3	.....	13.0	.....	9.2	4.7	.....	27.0	.....
Arco Oil & Gas Co.—Gillette, Campbell Co., 18-50n-73w	31.0	7.0	3	.....	17.1	.....	9.8	.....	.....	9.1	\$10.4
Riverton Dome, Fremont Co., 36-1s-43	30.0	7.0	2	.....	.....	.....	.....	.....	.....	1.8	\$11.4
Champlin Petroleum Co.—*Brady, Sweetwater Co.	65.0	46.6	2	.....	23.1	.....	38.3	.....	.....	18.9	.....
Manning, Converse Co.	4.0	0.7	3	.....	.....	.....	.....	.....	2.6	.....	.....
Patrick Draw, Sweetwater Co.	30.0	19.9	2	.....	14.1	1.2	7.9	.....	.....	5.9	.....
Cities Service Co.—Red Desert, Sweetwater Co., 7-19n-96w	48.0	29.0	7	.....	28.1	.....	.....	.....	26.9	.....	.....
Thundercreek, Campbell Co., 24-43n-69w	18.0	4.5	7	.....	.....	.....	.....	.....	12.9	.....	.....

Company, plant, location	MMcfd		Process method	Production—1,000 gal/day (Average based on the past 12 months)							Other
	Gas capacity	Gas throughput		Ethane	Prop.	Isobut.	Normal or unsplit butane	LP-gas mix	Raw NGL mix	Debut. nat. gas.	
Colorado Interstate Gas Co.—Rawlins, Carbon Co., sw4-sw4-25-21n-86w	220.0	116.0	2	.....	51.0	31.3	.....	19.2	.....	.....	.....
Conoco Inc.—Sussex, Johnson Co., 243-41n-78w	15.0	1.1	3	.....	1.4	.....	.....	.....	1.7	.....	.....
Cra Inc.—Gillette, Campbell Co., 1-49n-74w ..	5.0	2.5	3	.....	5.0	.....	.....	.....	5.0	.....	.....
Ecological Engineering Systems Inc.—Hartzog Draw, Campbell Co., nw4-ne4-11-45n-76w 6pm	5.0	2.5	3	.....	.....	.....	.....	8.6	.....	.....	110.9
Springen, Crook Co., se4-se4-28-51n-71w 6pm	8.0	0.2	3	.....	1.0	.....	.....	1.5	.....	.....	.....
Gas Producing Enterprises Inc.—Patrick Draw, Sweetwater Co., 12-19n-99	12.0	7.5	2	.....	1.9	.....	1.2	.....	.....	0.4	.....
Energy West Ltd.—Manderson, Big Horn Co., sw¼-sw¼-se¼-19-50n-92w	1.5	0.7	3	.....	.....	.....	.....	.....	0.6	.....	.....
Husky Oil Co.—Ralston, Park Co., se¼-se¼-4-56n-101w, 6pm	7.2	2.8	2	.....	<0.1	.....	0.5	.....	.....	0.8	.....
Inexco Oil Co.—Well Draw, Converse Co., 13-50n-70w	25.0	6.0	2	.....	15.0	.....	.....	.....	.....	.....	.....
Kansas-Nebraska Natural Gas Co.—Casper, Natrona Co., 10-33n-78w	80.0	36.0	2	.....	12.3	.....	6.6	.....	.....	4.8	.....
Flat Top, Converse Co., 20-33n-68w	6.0	3.1	2	.....	4.1	.....	.....	.....	4.2	.....	.....
Marathon Oil Co.—Lance Creek, Niobrara Co., 32-36n-65w	2.2	1.4	3	.....	.....	.....	.....	.....	3.9	.....	.....
Rock River, Carbon Co., 34-19n-78w	0.5	0.3	3	.....	.....	.....	.....	.....	0.4	.....	.....
McCulloch Gas Processing Corp.—Hilgert, Campbell Co., 26-45n-71w	60.0	12.0	3	.....	16.6	.....	.....	.....	64.0	.....	.....
Oedekoven, Campbell Co., 30-55n-73w	12.5	4.0	3	.....	6.0	.....	.....	.....	8.0	.....	.....
Rocky Point, Campbell Co., 34-57n-76w	6.0	1.0	5	.....	.....	.....	.....	.....	0.3	.....	.....
Well Draw, Converse Co., 26-35n-69w	3.0	1.0	3	.....	2.5	.....	.....	.....	3.0	.....	.....
Mitchell Energy & Development Corp.—Converse Co.	1.5	0.5	4	.....	.....	.....	.....	.....	3.5	.....	110.1
Mountain Fuel Supply Co.—Church Buttes, Uinta Co., 1-16n-113w	100.0	20.0	1	.....	.....	.....	.....	.....	.....	4.9	.....
Natomas North America Inc.—Recluse, Campbell Co., 15-56n-74w	9.0	2.7	3	.....	7.8	.....	.....	.....	8.1	.....	.....
Northern Gas Products Co.—Painter, Uinta Co., Northwest Pipeline Corp.—Opal, Lincoln Co., 27-21n-114w	35.0	NR	3	.....	.....	.....	.....	45.6	.....	.....	.....
Phillips Petroleum Co.—Douglas, Converse Co., se4-ne4-34-33n-71w	250.0	158.2	2	.....	83.0	40.0	.....	.....	30.4	.....	.....
Ralston Processing Associates Inc.—Oregon Basin, Park Co., nw4-8-52n-100w	75.0	NR	7	.....	.....	.....	.....	.....	.....	.....	.....
Sun Gas Co.—Grieve, Natrona Co., 22-32n-85w	6.0	4.2	2	.....	2.5	.....	3.1	1.6	3.6	.....	.....
Powell, Converse Co., 22-40n-74w	10.0	8.1	2	.....	.....	.....	.....	.....	20.6	.....	.....
Union Oil Co. of California—Worland, Washakie Co., 17-48n-92w	12.0	5.4	3	.....	.....	.....	.....	.....	10.7	.....	.....
.....	50.0	16.9	1	.....	15.6	.....	5.1	.....	.....	9.2	.....
Total	1,378.4	758.1			360.1	32.5	165.8	81.2	184.9	145.7	2.8

ABU DHABI

Abu Dhabi Gas Liquefaction Co.—Das Island LNG-LPG	450.0	270.0	6&7		302.6		213.4			90.4	11,749.4
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† LNG.

ALGERIA

Sonatrach—Camel plant, Arzew	NR	170.0	4&7					218.6			112,309.0
Hassi R'Mel, Laghouat, Module 0	NR	1,578.0	NR								113,140.2
Hassi R'Mel, Laghouat, Module 1	NR	2,085.2	6	.....	.....	.....	.....	.....	.....	.....	.....
Skikda	NR	435.0	4&7	.....	.....	.....	.....	414.2	.....	.....	.....
Total	9,335.2	4,268.2						632.8			5,449.2

ARGENTINA

Gas del Estado—Cañón Seco, San Jorge	17.7	22.8	1	.....	5.6	.....	11.9	.....	.....	6.5	.....
Caimancito Norte, Ledesma, Jujuy	35.3	37.3	1	.....	11.4	.....	10.6	.....	.....	5.1	.....
Centenario, Neuquen	35.3	18.2	1	.....	8.3	.....	8.6	.....	.....	6.5	.....
General Cerri, Neuquen and Austral, Bahia Blanca	812.3	206.8	1&7	.....	70.8	.....	59.0	.....	.....	22.5	.....
El Medanto, Neuquen, Rio Negro	35.3	37.3	1	.....	.....	5.4	.....	.....	.....	10.2	.....
Total	935.9	322.4			96.1	5.4	90.1			50.8	

AUSTRALIA

Esso Exploration and Production Australia—Gippsland No. 1 and 2, Offshore, near Sale, Victoria	810.0	453.0	2&7	399.0	427.0		254.0			11,645.0	
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AUSTRIA

OeMV AG—Piberbach, Upper Austria	2.2	1.6	3						0.3		
Roseldorf, Lower Austria	3.5	3.1	3						0.6		
Total	5.7	4.7							0.9		

BAHRAIN

Bahrain National Gas Co.—Jebel Ad-Dukhan ..	110.0	108.0	2		118.4		91.9			123.8	
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BOLIVIA

Yacimientos Petroliferos Fiscales Bolivianos—Ccipa plant, Andres Banez Province, Santa Cruz	192.0	110.0	1						10.0		
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Company, plant, location	MMcfd		Process method	Production—1,000 gal/day (Average based on the past 12 months)							Debut. nat. gaso.	Other
	Gas capacity	Gas throughput		Ethane	Prop.	Isobut.	Normal or unsplit butane	LP-gas mix	Raw NGL mix			
*Rio Grande plant, Cordillera Province, Santa Cruz	282.0	270.0	1	.....	.....	.....	.....	.....	22.5	.....	.....	
Total	474.0	380.0		.....	.....	.....	.....	.....	32.6	.....	.....	
BRAZIL												
Petroleo Brasileiro SA—Aracaju, Sergipe	70.0	64.0	2	.....	.....	.....	.....	145.0	.....	29.0	.....	
Candeias, Bahia	74.0	71.0	2	.....	.....	.....	.....	.....	112.8	.....	.....	
Catu, Agua Grande, Bahia	58.5	50.0	2	.....	.....	.....	.....	.....	124.7	.....	.....	
Total	202.5	185.0	.....	.....	.....	.....	.....	145.0	237.5	29.0	.....	

Canada

Alberta

Albersun Pipeline Ltd.—Atmore, se 32-67-17 w4m	15.0	12.0	4&5	.....	.....	.....	.....	.....	.....	.....	.....	.....
Calling Lake, nw 33-71-17 w4m	18.0	4.0	4&5	.....	.....	.....	.....	.....	.....	.....	.....	.....
Portage, nw 10-78-17 w4m	17.0	14.0	4&5	.....	.....	.....	.....	.....	.....	.....	.....	.....
Tweedie, nw 28-68-13 w4m	25.0	10.0	4&5	.....	.....	.....	.....	.....	.....	.....	.....	.....
Alberta Natural Gas Co.—Cochrane, ne 1/4-16-26-4-5 w5m	950.0	719.0	2&7	900.00	.....	.....	.....	.....	450.0	.....	.....	.....
Aitana Exploration Co.—Caroline, 12-36-34-6-5 w5m	13.0	10.0	3	.....	.....	.....	.....	.....	42.0	.....	.....	.....
Monitor, 10-3-35-4 w4m	10.0	10.0	4	.....	.....	.....	.....	.....	.....	.....	.....	.....
Niton, 10-16-55-13 w5	5.0	4.5	3	.....	.....	.....	.....	.....	.....	8.2	.....	.....
Saddle Lake, 16-26-57-13 w4	5.0	5.0	4	.....	.....	.....	.....	.....	.....	.....	.....	.....
Amerada Minerals Corp., of Canada Ltd.—												
Ferrier, sw 1/4-2-6-41 w5	100.0	NR	2	.....	71.5	.....	.....	38.0	.....	44.4	.....	.....
Carrington, 20-34-3 w5	4.0	2.5	.....	.....	.....	.....	.....	.....	.....	8.7	.....	.....
Olds, 3-18-32-1 w5	85.0	NR	2	.....	14.2	9.6	.....	.....	.....	20.1	.....	.....
Amoco Canada Petroleum Co.—Ante Creek, 10-18-65-23 w5m	10.0	2.6	3	.....	.....	.....	.....	.....	19.8	.....	.....	113.2
Berrymoor, 3-2-50-6 w5m	10.0	8.2	3	.....	.....	.....	.....	.....	.....	.....	.....	111.3
Bigoray, 6-28-51-8 w5m	12.5	9.0	3	.....	.....	.....	.....	.....	.....	.....	.....	.....
Bigstone, 1-10-21-27 w5m	48.0	37.5	3	.....	.....	.....	.....	.....	.....	.....	.....	1112.0
*East Crossfield, 9-14-28-1 w5m	160.0	114.0	1-3-4	.....	.....	.....	.....	.....	.....	.....	.....	.....
Fir, 32-58-21 w5m	52.0	38.0	1	.....	.....	.....	.....	.....	.....	.....	.....	.....
Josephine, ne 1/4-1-83-10 w6m	50.0	13.0	3	.....	.....	.....	.....	.....	.....	.....	.....	116.6
Kirby, ne 4-25-73-5 w4m	45.0	NR	1&4	.....	.....	.....	.....	.....	.....	.....	.....	.....
Lanaway, 5-36-4 w5m	15.0	6.5	1&4	.....	.....	.....	.....	.....	.....	.....	.....	.....
Leismer, 16-23-77-9 w5m	32.5	25.3	1&4	.....	.....	.....	.....	.....	.....	.....	.....	116.7
Lobstick, 9-17-50-7 w5m	33.0	12.2	3-4	.....	.....	.....	.....	.....	.....	.....	.....	.....
Marten Hills, 18-76-25 w4m	133.0	82.0	1	.....	.....	.....	.....	.....	.....	.....	.....	.....
Mitsue-Nipisi, 30-72-4 w5m	25.0	12.0	3	.....	.....	.....	.....	.....	141.0	.....	.....	.....
Penbalta 1, 9-25-48-7 w5m	11.0	3.1	3	.....	.....	.....	.....	.....	18.8	.....	.....	.....
Penbalta 2, 9-15-47-7 w5m	11.0	5.9	3	.....	.....	.....	.....	.....	20.0	.....	.....	.....
Penbalta 5, 4-2-48-7 w5m	11.0	3.6	3	.....	.....	.....	.....	.....	14.5	.....	.....	.....
Penbalta 7, 4-28-47-9 w5m	11.0	5.8	3	.....	.....	.....	.....	.....	28.2	.....	.....	.....
Penbalta 8, 4-5-49-9 w5m	11.0	3.5	3	.....	.....	.....	.....	.....	14.4	.....	.....	.....
*Ricinus, 11-30-35-8 w5m	115.0	60.0	7	.....	.....	.....	.....	.....	150.0	.....	.....	.....
Ricinus D Battery, 4-11-34-8 w5m	20.0	5.0	1&4	.....	.....	.....	.....	.....	.....	.....	.....	110.1
Sedalia, sw 26-30-4 w4m	8.5	4.0	1-3-4	.....	.....	.....	.....	.....	.....	.....	.....	.....
Three Hills Creek, nw 4-13-35-26 w4	12.0	3.5	3	.....	.....	.....	.....	.....	4.6	.....	.....	112.0
Twining, 6-16-32-24 w4m	10.0	3.8	1&5	.....	.....	.....	.....	.....	.....	.....	.....	111.1
Waskahigan, ne 7-64-23 w5m	17.0	5.5	5	.....	.....	.....	.....	.....	.....	.....	.....	11323.0
West Whitecourt, 8-17-60-15 w5m	250.0	210.0	1-3-4	.....	.....	.....	.....	.....	.....	.....	.....	.....
Anderson Exploration Ltd.—Belloy, LSD 13-16-78-1 w6m	15.0	10.0	4&5	.....	.....	.....	.....	.....	.....	0.4	.....	.....
Dunvegan, LSD 15-3-81-4 w6m	240.0	190.0	3&4	.....	.....	.....	.....	.....	.....	64.0	.....	.....
Hines, LSD 6-35-85-3 w6m	5.0	4.0	4&5	.....	.....	.....	.....	.....	.....	.....	.....	.....
Index Oil Co.—Highvale, 10-4-51-4 w5m	7.5	3.0	3	.....	.....	.....	.....	.....	1.2	1.9	.....	.....
Swallow, LSD 15-35-29-24 w4m	24.0	24.0	3	.....	.....	.....	.....	.....	.....	6.0	.....	.....
Twining, LSD 12-10-31-2 w4m	18.0	18.0	3	.....	.....	.....	.....	.....	.....	.....	.....	.....
Aquitaine Co. of Canada Ltd.—Rainbow, 10-10-109-8 w6m	80.0	70.0	4	.....	.....	.....	.....	.....	7.0	.....	.....	.....
Ram River, 4-2-37-10 w5m	630.0	500.0	5	.....	.....	.....	.....	.....	.....	35.0	.....	.....
Wimbome, 16-5-35-26 w4m	5.0	1.8	3	.....	.....	.....	.....	.....	.....	0.2	.....	.....
Blake Resources Ltd.—Alix, 6-24-40-24 w4m	2.0	1.5	6	.....	.....	.....	.....	.....	.....	.....	.....	110.1
Bumper Development Corp. Ltd.—Bumper												
Cecsal Carbon, LSD 6-3-29-23 w4m	10.0	8.0	3	.....	.....	.....	.....	.....	.....	2.1	.....	.....
Canadian Hunter Exploration Ltd.—Basset												
Lake, 10-29-104-2 w6m	7.0	6.0	2	.....	.....	.....	.....	.....	.....	.....	.....	.....
Basset Lake South, 10-29-106-5 w6m	4.0	3.0	2	.....	.....	.....	.....	.....	.....	.....	.....	.....
Elmworth, 1-8-70-11 w6m	245.0	150.0	5	.....	.....	.....	.....	.....	.....	.....	.....	114.6
Haig River, 11-33-104-5 w6m	5.0	4.0	2	.....	.....	.....	.....	.....	.....	.....	.....	.....
South Gold Creek, 15-66-5 w6m	15.0	10.0	2	.....	.....	.....	.....	.....	.....	.....	.....	.....
Canadian Occidental Petroleum Ltd.—Eagle-sham, 5-13-77-26 w5	7.9	0.2	3	.....	.....	.....	.....	.....	.....	.....	.....	111.0
Petrogas Processing, Crossfield, s 1/2-2-26-29 w4	317.0	173.6	2	.....	48.9	.....	.....	36.0	.....	66.8	11238.6	.....
Canadian Superior Oil Ltd.—Harmattan, 27-31-4 w5m	504.0	347.1	2	.....	117.1	.....	.....	90.9	.....	230.7	.....	.....
Lone Pine Creek South, 27-29-28 w4m	35.0	14.9	3	.....	.....	.....	.....	.....	.....	7.6	.....	.....
Candel Oil Ltd.—Big Bend, 13-36-66-27 w4	35.0	16.8	3	.....	.....	.....	.....	.....	.....	.....	.....	110.1
Castor, 4-3-38-13 w4	1.5	0.8	4&6	.....	.....	.....	.....	.....	.....	.....	.....	.....
Medicine Hat, 4-1-16-3 w4	21.0	9.1	4	.....	.....	.....	.....	.....	.....	.....	.....	1135.3
Minnehik-Buck Lake, 10-5-46-6 w5	108.0	72.8	4&5	.....	.....	.....	.....	.....	.....	.....	.....	.....
CDC Oil & Gas Ltd.—Entice, 1-24-28-24 w4m	10.0	7.0	4&5	.....	.....	.....	.....	.....	.....	.....	.....	.....
Flat Lake, 12-66-20 w4m	25.0	16.0	4	.....	.....	.....	.....	.....	.....	.....	.....	.....
Hussar, 13-36-24 w4m	75.0	19.0	2&4	.....	11.4	7.6	.....	.....	.....	6.1	.....	.....

Company, plant, location	MMcf/d		Process method	Production—1,000 gal/day (Average based on the past 12 months)							Debut. nat. gaso.	Other
	Gas capacity	Gas through-put		Ethane	Prop.	Isobut.	Normal or unsplit butane	LP-gas mix	Raw NGL mix			
Nordeg River, 6-10-44-12 w5m	55.0	34.0	5						11.9			
Wayne Rosedale, 12-4-28-20 w4m	25.0	9.5	4&5						2.2			
Ceja Corp.—Delburne, LSD 10-8-37-23 w4m	13.0	3.8	1&4							1.0		
Penhold, LSD 10-30-36-27 w4m	6.5	2.9	3							2.9		
Chevron Standard Ltd.—Bigoray, 10-7-51-9 w5	3.0	1.6	3						5.9			
Brazeau, 16-35-48-12 w5	10.0	6.9	2&3					22.6				
Ferrybank, 14-11-45-27 w4	5.0	2.7	3						1.4			
Joffre, 14-36-38-27 w4	9.9	4.5	3						4.9			
*Kaybob South No. 3, 15-59-18 w5	445.0	312.9	2						424.6	542.5		
Mitsui, 30-72-4 w5	29.0	25.9	3		65.4		43.3			29.6		
Nevis, 15-22-39-22 w4	100.0	52.7	3		17.3		14.9			27.8		
North Gilby, 1-24-41-3 w5	23.0	16.3	3&5						11.0			
Princess, 12-12-20-12 w4	13.0	5.7	5							0.8		
Sylvan Lake, 1-21-38-2 w5	31.5	14.0	2		13.7		9.2			9.3	1177.1	
West Pembina, 11-22-49-12 w5	29.6	NR	3&4					70.1				
Cities Service Co.—Keystone, LSD 5 35n-4ws	15.0	8.6	2		2.7		3.6			2.4		
Paddle River, LSD 13, 6-57n-8ws	82.0	38.0	7						24.6			
Corvair Oils Ltd.—Bellshill Lake, 1-35-41-13 w4m	3.0	1.4	2									
Dome Petroleum Ltd.—Amisk, 1-23-41-8 w4m	10.0	3.0	5								11<1.0	
Atlee-Buffalo, 12-21-20-8 w4	4.5	2.5	1&4									
Brownfield, se 1/4-2-39-12 w4m	22.0	19.0	5							1.4		
Caroline, 1-11-35-6 w5	50.0	17.6	2						22.7			
Cherhill, 4-24-56-5 w5	8.0	1.5	2						5.0			
Chinchaga, 1-24-96-5 w6	40.0	26.0	2						46.2	88.2		
Choice, 13-17-40-9 w4m	12.0	5.5	5							1.0		
Consort, 8-19-36-2 w4m	70.0	46.0	5							3.4		
*East Castor, 5-3-38-13 w4m	15.0	12.0	5							<0.1		
Edmonton, sw 1/4-4-52-25 w4m	315.0	191.7	7	459.1					317.6			
Edward, 7-12-62-17 w4	1.2	1.2	1&4									
Empress, 11-20-1 w4m	1,500.0	1,437.0	7	572.4					500.9			
Garrington, 11-17-34-2 w5m	16.0	16.0	7					1.1		0.4		
Goodfare, 19-72-11 w6m	50.0	30.0	3							9.3		
Jenner, 10-34-19-9 w4	17.0	12.0	1&4									
Keystone, 6-15-48-3 w5	7.0	3.3	2						4.0			
Medicine Hat North, 1-7-16-2 w4	4.5	3.0	1&4									
Medicine River, 6-16-38-4 w5	8.0	5.4	2						5.0			
Prosperity, 11-28-67-19 w4	6.0	1.5	1&4									
Provost, ne 1/4-19-36-5 w4m	80.0	50.0	5							3.3		
Saddle Lake, 9-9-58-11 w4	55.0	42.6	1&4									
Tony Creek, 1-4-62-21 w5m	12.0	6.0	3							1.9		
Travers, 16-13-14-18 w4	4.0	3.0	1&4									
Valhalla, 1-29-75-9 w6	30.0	26.0	5							8.4		
Verger, 6-25-23-16 w4m	3.0	2.0	3							<0.1		
Vulcan No. 1, se 1/4-24-15-22 w4m	25.0	18.0	5							2.6		
Vulcan No. 2, 1-24-15-22 w4m	30.0	30.0	2							8.2		
Warwick, 10-18-53-14 w4	6.0	6.0	1&4									
West Paddle River, 11-10-56-11 w5m	17.8	13.5	3&4					11.4	12.6			
Wildunn, 18-29-12 w4m	8.8	8.8	3							<0.1		
Esso Resources Canada Ltd.—Boundary Lake South, Floral, 1-14-85-13 w6	17.0	14.0	5							3.1		
*Comet Miscile, Rainbow Lake, 12-23-110-7 w6	8.0	8.0	3									
Devon—1 and 2, 34-50-26 w4			1		(332.6)		334.2 (226.8)			(146.2)		
Fernier South	10.0	3.0	3-4		10.8							
*Golden Spike, 16-22-51-27 w4	95.0	95.0	4					120.1				
Joffre D2, Lacombe, ne 1/4-17-39-26 w4	7.5	3.4	3-4		3.3	1.1	2.7			1.3		
Judy Creek, 10-25-64-11 w5	265.0	173.0	1-2-3 4-5&7						1,218.0			
*Leduc, Devon, 34-50-26 w4	35.0	24.0	3		21.6		23.4			12.4		
Niton, LSD 14-18-54-12 w5	50.0	30.0	3						22.8			
Quirk Creek, s 1/2 4-21-4 w5	90.0	50.0	2					69.6				
Reowater, LSD 8 29-57-21 w4m	22.1	18.4	2		60.0		39.6			19.0		
Francana Oil & Gas Ltd.—Cessford, 7-17-26-15 w4	7.0	1.7	3								110.3	
Huxley, 6-17-34-24 w4	8.0	4.0	5								110.3	
Stanmore, 4-1-29-12 w4m	30.0	25.0	3						2.9			
Strome-Holmberg, 13-14-44-17 w4m	12.0	10.0	3								110.2	
General American Oils Ltd.—Gilby, LSD 6-36-40-3 w5m	2.7	2.4	4							1.5		
Sylvan Lake, LSD 13-25-37-3 w5m	30.0	22.0	3						30.6			
Goliad Oil & Gas Co.—Bantry, LSD 4-33-17-12 w4	4.5	2.0	3							0.6		
Gulf Canada Resources Inc.—Baptiste, LSD 5-28-76-22 w4m	10.5	5.2	1									
Bashaw, LSD 10-6-42-22 w4m	3.0	0.8	2						0.1			
Gilby, 6-13-40-3 w5m	25.0	15.4	5						3.5			
Gulf Ester, 6-9-31-1 w4m	2.6	0.4	1									
Hanna, 6-31-14 w4m	3.5	1.3	2									
Morin-Ghost Pine, LSD 1, 8-11-31-21 w4m	110.0	47.8	3							0.7		
Nevis, ne 1/4-9-33-38-22 w4m	125.0	73.9	2		92.9		57.0			54.0		
Pincher Creek, s 1/2 23-4-29 w4m	90.0	29.7	1		12.1		12.4			36.8		
Regnier, 11-24-41-21 w4m	7.0	2.2	3							0.2		
Rimby, LSD s 1/2 5-44-1 w5m	423.0	243.1	2		249.1		156.3			224.3		
Strachan, LSD n 1/2 34-37-9 w5m	275.0	129.6	7		26.1		30.0			125.3		
Swalwell, LSD 6-33-29-24 w5m	4.0	2.4	5							0.5		
Home Oil CL—Bashaw, 8-10-42-22 w4m	11.9	4.0	5							0.6		
*Carstairs-Crossfield, 2 3-30-2 w5m	280.0	136.0	2		91.5	69.6				112.1		
Cossack, 7-17-60-17 w4m	6.0	1.5	4									
Leismer, 6, 7-77-7 w4m	35.0	30.0	4									
Marten Hills South-1, 14-22-74-24 w4m	25.8	12.0	4&1									
Marten Hills South-2, 14-29-74-25 w4m	8.0	2.5	1&4									

Company, plant, location	MMcfd			Production—1,000 gal/day (Average based on the past 12 months)								Debut. nat. gaso.	Other
	Gas capacity	Gas through-put	Process methou	Ethane	Prop.	Isobut.	Normal or unsplit butane	LP-gas mix	Raw NGL mix				
Retlaw, 12-2-13-19 w4m	10.0	8.0	5								0.4		
South Elkton, 2-3-31-4 w5m	4.4	0.9	3								0.8		
Tieland, 5-14-67-2 w5m	11.0	9.0	1&4										
Hudson's Bay Oil & Gas CL—													
Brazeau River, 12-46-14 w5m	219.0	101.0	3								15.7		
Caroline, 20-34-4 w5m	55.0	23.0	5		21.5		25.8				35.2		
Cessford, 8-24-12 w4m	125.0	31.1	3								3.0		
Edson, 11-53-18 w5m	374.4	147.0	2								12.8		
Gilby North, 12-41-4 w5m	4.6	2.3	3								17.0		
Gilby South, 26-40-3 w5m	9.0	3.5	5								13.1		
*Kaybob South No. 1, 12-62-20 w5m	227.0	138.0	2		69.6		63.6				213.3		
*Kaybob South No. 2, 12-62-20 w5m	170.0	122.0	2					230.2			235.4		
Lone Pine Creek, 23-30-28 w4m	74.4	23.8	2								48.4		
North Twining, 31-32-24 w4m	8.3	4.9	3		12.1		11.5				8.4		
Sturgeon Lake South, 2-69-22 w5m	20.0	13.7	3						17.2		0.3		
Sundance, 25-54-21 w5m	15.6	11.0	3								26.7		
Sylvan Lake, 32-37-3 w5m	65.2	25.2	2		31.7		19.8				16.9		
Tangent, 20-80-24 w5m	7.5	3.4	3										
West Fox Creek, 22-60-19 w5m	15.8	7.3	3					15.5					
Zama, 11-116-6 w6m	25.3	8.3	3					43.9			29.5		
ICG Explorations Inc.—Acheson,													
sw2-53-26 w4m	10.0	8.0	2		20.5		13.2				5.7		
Gilby, 10-10-041-03 w5	12.0	6.5	1						3.0				
Leafland, 13-16-040-05 w4	5.5	2.7	7					3.7					
Kerr-McGee Corp.—Elnora, 5-19-35-22 w4	18.1	9.5	2								115.5		
Ferrybank, 3-31-44-27 w4	8.5	5.9	2								110.9		
Rich, 16-22-35-21	3.1	1.8	2								110.9		
Lariat Oil & Gas Ltd.—Three Hills, LSD 11-16-31-23 w4m	5.0	4.0	2						<0.1				
Merland Explorations Ltd.—Bantry,													
5-8-19-13 w4m	18.0	25.0	3										
Beaverhill Lake, 4-17-52-18 w4m	4.0	4.0	3&4								11<0.1		
Birchway, 4-27-44-10 w4m	4.0	3.5	4										
Conlac, 14-14-14-3 w4m	25.0	20.0	3										
Elk Island, 2-29-53-14 w4m	4.0	2.5	4										
Giroux Lake, 10-11-66-22 w5m	2.5	1.5	3&4								11<0.1		
Halkirk, 14-11-39-16 w4m	3.5	2.5	3&4								11<0.1		
Hilda, 9-33-18-2 w4m	6.0	5.0	4										
Jarrow, 8-15-45-11 w4m	15.0	13.0	4										
Ukalta, 10-1-57-18 w4m	5.0	2.0	4										
Vale, 15-19-14-3 w4m	36.0	29.0	4										
Viking-Kinsella, 11-17-46-8 w4m	18.0	15.0	4										
Warwick, 8-34-52-14 w4m	4.0	3.5	4										
Westlock, 13-24-61-26 w4m	10.0	7.5	1-3-4								111.0		
Mobil-GC Canada Ltd.—Teepee Creek, Grande Prairie 2-74-4 w6m	18.0	16.0	4								111.3		
Mobil Oil Canada Ltd.—Carson Creek, 23-61-12 w5m	87.0	70.0	2		69.4		54.7				59.1		
Duhamel, 32-45-14 w5m	3.7	1.2	3						3.7				
Three Hills, 33-31-23 w4m	30.0	15.0	3						10.9		5.3		
Wimborne, 12-34-26 w4m	33.0	18.5	3								1196.2		
Murphy Oil CL—Cessford Gage No. 3,													
11-27-25-13 w4	3.0	2.0	1										
North Cessford, 6-29-26-13 w4	1.5	0.5	1&4										
Princess No. 1, 14-23-19 10w4	7.5	7.0	1										
Princess No. 2, 8-16-20 10w4	7.5	6.5	1										
Norcen Energy Resources Ltd.—Bruce/Beaver,													
03-06-47-15 w4m	30.0	9.7	4					0.1					
Ferrier Radial Lake, 1-34-40-9 w5m	20.0	20.0	3						0.6				
Gilby, Lacombe, 10-08-41-01 w5m	3.5	0.1	2					0.4					
Kessler, 13-05-39-08 w4m	6.5	2.7	4					0.3					
LicLeod River, Dist. 14, 07-34-54-14 w5m	5.2	4.9	2					3.1					
St. Albert, Sturgeon Dist., se26-54-25 w4m	20.0	14.0	2		5.5		3.4				3.5		
PanCanadian Petroleum Ltd.—Alderson West,													
10-28-15-15 w4m	10.0	5.1	3								110.4		
Bassano Lathom, 10-5-22-18 w4m	20.0	10.8	5								110.0		
Cantex Norton Gilby, 6-21-40-2 w5m	2.1	0.7	3								110.3		
Countess Makepeace, 12-33-22-18 w4m	20.0	8.4	3								110.6		
Countess Sweetening, 10-20-18-15 w4m	6.1	2.7	2					2.7			112.0		
Entice, 10-7-28-23 w4m	7.0	2.1	3								11<0.1		
Ferrybank, 2-1-44-28 w4m	20.4	9.8	3								112.9		
Morley, 15-2-26-7 w5m	10.0	2.3	1										
Phoenix, 7-21-39-10 w5m	2.5	0.2	5								110.8		
Ranier, 16-35-16-16 w4m	2.0	0.3	2										
Redland, 1-20-28-21 w4m	20.0	15.1	3		1.1		1.4				112.9		
Wayne Dalum, 5-17-27-19 w4m	19.0	7.3	5								110.8		
Wintering Hills, 1-18-25-17 w4m	20.0	6.0	5								110.3		
Petro-Canada Exploration Inc.—Brazeau,													
4-31-48-12 w5m	10.0	10.0	3&4						7.4				
Connorsville, 9-32-25-15 w4m	30.0	19.4	3								112.3		
Empress, ne1/4-11-20-1 w4m	2,000.0	1,800.0	2&7	1,008.0	504.0	189.0					105.0		
Ferrier, 9-22-39-8 w5m	9.0	2.2	3								110.8		
Gilby, 2-27-40-3 w5m	25.0	4.1	3								115.5		
Gilby Medicine River, 5-5-40-3 w5m	28.0	11.8	3&5								112.6		
Gold Creek, 13-26-67-5 w6m	48.0	15.0	3&4								26.9		
Kaybob A&B, Whitecourt, 8-9-64-19 w5m	90.0	65.0	3								112.3		
*Kaybob "C", Whitecourt, 8-9-64-19 w5m	25.0	20.0	3					59.6			21.6		
Sedgewick, 2-16-42-12 w4m	6.0	3.0	4										
White Court, Lac St Anne, 12-26-59-11 w5m	68.0	40.0	5								116.2		
Petrolina Canada Inc.—Greencourt,													
sw1/4-26-59-9 w5m	36.0	17.4	5								3.6		
Wildcat Hills, sw1/4-16-26 5w5	110.0	64.3	5								18.9		

Company, plant, location	MMcfd			Production—1,000 gal/day (Average based on the past 12 months)							
	Gas capacity	Gas throughput	Process method	Ethane	Prop.	Isobut.	Normal or unsplit butane	LP-gas mix	Raw NGL mix	Debut. nat. gaso.	Other
Placer Cogo Petroleum Ltd.—Provost,											
4-16-33-7 w4m.....	5.6	1.2	3	.....	.....	.....	.....	.....	.....	.....	.....
Sedalia, 29-31-5 w4m.....	7.0	1.5	5	.....	.....	.....	.....	.....	.....	.....	.....
Steveville, 31-22-11 w4m.....	22.0	2.4	5	.....	.....	.....	.....	.....	.....	.....	.....
Wood River, 16-43-23 w4m.....	5.0	0.1	5	.....	.....	.....	.....	.....	.....	.....	.....
Quasar Petroleum Ltd.—Atim, 10-19-54-26 w4m.....	3.0	1.5	3&4	.....	.....	.....	.....	.....	.....	.....	110.4
Simonette, LSD 9-6-63-25 w5m.....	8.0	3.0	4&5	.....	.....	.....	.....	.....	.....	.....	110.4
Viking A, LSD 10-3-38-2 w5m.....	2.0	1.2	3&4	.....	.....	.....	.....	.....	.....	.....	110.6
Sabine Canada Ltd.—Carrot Creek, LSD 10-16-53-13 w5m.....	8.0	5.5	3	.....	.....	.....	.....	.....	10.5	.....	.....
Medicine River, LSD 10-14-39-3 w5m.....	6.0	2.0	2	.....	.....	.....	.....	.....	4.2	.....	.....
North Edson, LSD 16-15-53-18 w5m.....	5.0	5.0	3	.....	.....	.....	.....	.....	2.5	.....	.....
South Edson, 10-30-52-17 w5m.....	2.0	1.1	2	.....	.....	.....	.....	.....	2.0	.....	.....
Saratoga Processing CL—Coleman, 11-8-5 w5m	52.0	35.0	1	.....	.....	.....	.....	.....	.....	.....	.....
Shell Canada Resources Ltd.—Burnt Timber 1 and 2, 13-30-7 w5m.....	114.0	63.0	1-2	.....	.....	.....	.....	.....	.....	9.2	.....
Cecil, 10-84-8 w6m.....	5.0	2.0	1&6	.....	.....	.....	.....	.....	.....	1.3	.....
Hope Creek, 17-64-13 w5m.....	10.0	6.0	1&3	.....	.....	.....	.....	.....	.....	1.3	.....
House Mountain, 8-70-10 w5m.....	9.0	2.0	3	.....	.....	.....	.....	.....	40.0	.....	.....
Innisfail, 3-35-1 w5m.....	13.0	10.0	1&3	.....	.....	.....	.....	.....	.....	15.4	.....
Jumping Pound, nw¼ 13-25-5 w5m, se¼ 23-25-5 w5m, sw¼ 24-25-5 w5m.....	200.0	156.0	1-2-3	.....	20.0	.....	23.0	.....	.....	97.0	.....
Pouce Coupe, 8-80-12 w6m.....	4.0	1.0	1&6	.....	.....	.....	.....	.....	.....	0.5	.....
Simonette, 6-63-25 w5m.....	27.0	7.0	1&3	.....	.....	.....	.....	15.6	.....	.....	.....
South Rosevear, ne 11-54-15 w5m.....	50.0	22.0	2	.....	.....	.....	.....	.....	.....	7.4	.....
*Waterton 1 & 2, s½ 20-4-30 w4m, n½ 17-4-30 w4m, se¼ 24-4-1 w5m.....	311.0	203.0	1-2-3 & 7	171.0	74.0	.....	69.0	.....	.....	332.0	.....
Star Oil & Gas Ltd.—Sunnybrook ne¼ 15-22-48 2 w5m.....	5.5	4.2	2&4	.....	.....	.....	.....	.....	.....	2.1	110.5
Sylvan Lake, ne¼ 16-19-38-12 w5m.....	7.0	5.5	2&4	.....	.....	.....	.....	.....	.....	4.2	11<0.1
Steen Resources Ltd.—Crossfield, 8-20-30-3 w5m.....	4.0	1.5	4	.....	.....	.....	.....	.....	.....	.....	110.6
Suncor Inc.—Calling Lake South, se20-70-22 w4m.....	10.0	8.0	4&5	.....	.....	.....	.....	.....	.....	.....	.....
Countess-Duchess, Newell Co., LSD 8-36-20-16 w4m.....	21.0	10.0	4&5	.....	.....	.....	.....	.....	.....	.....	.....
Enchant, Taber Co., LSD 11-35-13-17 w4m.....	20.0	9.0	4&5	.....	.....	.....	.....	.....	.....	.....	.....
Killam, Flagstaff 29, LSD 12-23-42-11 w4m.....	20.0	7.0	4&5	.....	.....	.....	.....	.....	.....	.....	.....
Nixon, nw¼ 16-72-16 w4m.....	6.5	1.9	1&4	.....	.....	.....	.....	.....	.....	.....	.....
North Rosevear, ne33-54-15 w5m.....	35.0	25.0	1&4	.....	.....	.....	.....	.....	.....	.....	.....
Northwest Jenner, Imperial Dist., LSD 9-21-21-9 w4.....	7.0	3.4	4&5	.....	.....	.....	.....	.....	.....	.....	.....
Sibbald, sw4 6-28-2 w4m.....	7.5	5.0	4&5	.....	.....	.....	.....	.....	.....	.....	.....
Texaco-Canada Inc.—Battle Lake, 3-23-46-2 w5m.....	5.5	NR	3	.....	.....	.....	.....	.....	5.8	.....	.....
*Bonnie Glen Cycle, 17-47-27 w4m.....	140.0	NR	7	.....	176.6	31.7	69.5	.....	.....	180.6	.....
Bonnie Glen, 17-47-27 w4m.....	50.0	NR	2	.....	95.4	.....	74.4	.....	.....	35.5	.....
Cynthia, 22-49-10 wsm.....	8.0	NR	3	.....	.....	.....	.....	13.8	.....	5.3	.....
Gilby, 15-22-40-3 w5m.....	58.0	NR	2	.....	32.1	.....	25.2	.....	.....	36.2	.....
Open Creek.....	3.0	NR	3	.....	.....	.....	.....	.....	10.8	.....	.....
Willesden Green, 17-42-6 w5m.....	12.2	NR	3	.....	.....	.....	.....	14.0	.....	5.0	.....
Texasgulf Inc.—Okotoks, MD 31, Foothills, sw¼ 27-20-29 w4m.....	30.0	23.6	1	.....	.....	.....	.....	.....	.....	.....	113.2
Texas Pacific Oil Canada Ltd.—Ferrier Cardium 2, 10-20-39-7 w5 LSD 1-20-39-7 w5m.....	20.0	14.0	3	.....	.....	.....	.....	.....	24.0	.....	.....
TG Hydrocarbons—Cessford, Special Area 3, LSD 4-6-24-10 w4m.....	15.0	3.7	4-5	.....	.....	.....	.....	.....	.....	.....	110.1
Consort, Special Area 4, LSD 7-34-34-6 w4m.....	6.0	2.4	4-5	.....	.....	.....	.....	.....	.....	.....	110.3
North Oyen, Special Area 3, LSD 11-17-29-4 w4m.....	2.3	1.1	4-5	.....	.....	.....	.....	.....	.....	.....	11<0.1
Veteran, Special Area 4, LSD 15-20-34-8 w4m.....	10.0	4.7	4-5	.....	.....	.....	.....	.....	.....	.....	110.4
Total Petroleum North America Ltd.—FPC Gilby, LSD 10-12-41-3 w5m.....	10.0	3.8	5	.....	.....	.....	.....	.....	.....	.....	111.1
Ulster Petroleum Ltd.—Irvine, 1-23-12-2 w4m	8.0	5.0	4	.....	.....	.....	.....	.....	.....	.....	.....
Western Decalta Petroleum Ltd.—Breton, 9-36-47-4 w4.....	3.3	1.2	3&4	.....	.....	.....	.....	.....	.....	4.2	.....
Leduc, 5-20-49-25 w4m.....	5.0	1.2	3	.....	.....	.....	.....	.....	0.2	.....	.....
Rockyford, 10-24-26-23 w4m.....	6.0	2.1	3	.....	.....	.....	.....	.....	1.0	.....	.....
Turner Valley.....	40.0	25.0	1&2	.....	30.2	.....	18.5	.....	.....	19.0	.....
Total.....	16,306.4	11,273.4		3,110.5	2,365.0	292.6	1,567.0	830.1	3,592.4	3,824.2	984.6

tFractionation. (Figures in parenthesis do not represent primary production, and are not added in state totals). †Iron Sponge. \$All figures are capacity.

British Columbia

Esso Resources Canada Ltd.—Boundary Lake, 1-2-85-14 w6.....	17.5	10.2	2	.....	22.6	10.6	.....	.....	.....	5.7	.....
Gas Trunkline of British Columbia—Boundary Lake, Lot A-10-25 15 WOM, Peace River ...	8.9	3.4	1	.....	.....	.....	.....	.....	.....	.....	.....
McBride Canada Ltd.—Sierra, c-91d-941-14..	280.0	105.9	1	.....	.....	.....	.....	.....	.....	.....	.....
Petro-Canada Explorations Inc.—Taylor, 3-25&26-82-18 w6m.....	550.0	455.0	1	.....	35.6	58.1	59.0	.....	.....	102.0	.....
Quasar Petroleum Ltd.—North Grizzly 1, a-74-g-93-1-15.....	15.0	12.0	4	.....	.....	.....	.....	.....	.....	.....	.....
Westcoast Transmission CL—Fort Nelson, Lot 2683, Peace River.....	840.0	685.0	1	.....	.....	.....	.....	.....	.....	.....	.....
Pine River, Lot 1156, Peace River.....	260.0	208.0	1	.....	.....	.....	.....	.....	.....	.....	.....
Total.....	2,058.4	1,509.5			58.2	68.7	59.0			107.7	

Company, plant, location	MMcfd		Process method	Production—1,000 gal/day (Average based on the past 12 months)								
	Gas capacity	Gas throughput		Ethane	Prop.	Isobut.	Normal or unsplit butane	LP-gas mix	Raw NSL mix	Debut. nat. gaso.	Other	
Northwest Territories												
Amoco Canada Petroleum Co.—Pointed Mountain, 95-85-n24	189.0	39.5	1									
Esso Resources Canada Ltd.—Norman Wells ...	3.0	2.0	5							1.2		
Total	192.0	41.5								1.2		
Saskatchewan												
Dome Petroleum Ltd.—Steelman, w½-21-4-5 w2m	17.0	15.0	2&7	63.0	45.6	5.0	16.9					
ICG Exploration Inc.—Hatton, 14-02-012-28 w3	3.0	5.5	4									
Totnes, 15-33-027-18 w3	2.5	1.5	4									
Esso Resources Canada Ltd.—Smiley, 8-9-31-25 w3m	3.0	0.4	3						0.5			
Merland Explorations Ltd.—Horsham, 1-18-16-29 w3m	6.0	4.5	4									
Mobil Oil Canada Ltd.—West Gull Lake, 9-14-19 w4m	15.0	0.3	4									
Saskatchewan Power Corp.—Coeville, 20-31-23 w3m	60.0	21.6	2								¹¹ 10.0	
Hoosier, 16-30-28 w3m	3.0	0.1	5								¹¹ <0.1	
*Success, 17-17-16 w3m	25.0	9.7	5								¹¹ <0.1	
Total	139.5	58.6		63.0	45.6	5.0	16.9		0.5		10.0	
CHILE												
Empresa Nacional del Petroleo—*Cullen, Magallanes, XII Region	160.0	122.0	2		53.1		34.6			21.1		
*Posesion-Cabo Negro, Magallanes, XII Region	350.0	288.0	7		135.4		89.3			85.4		
Total	510.0	410.0			188.5		123.9			106.5		
CHINA REPUBLIC (Taiwan)												
Chinese Petroleum Corp.—Chingtsaohu plant and field, Hsin Chu area	60.0	23.4	7	17.5					30.3			
Chinshui plant and field	36.0	27.2	2		10.1		7.6			3.1		
Chuhuangkeng plant and field	75.0	42.6	1									
Tieh-Che-Shan plant and field, Tung Hsiao area	100.0	92.6	7	88.7	41.6	1.1	25.0			26.7		
Total	271.0	185.8		106.2	51.7	1.1	32.6		30.3	29.8		
DOMINICAN REPUBLIC												
Falconbridge Dominicana C x A—*Bonao field, Arzo, Novel Province, LaVega, La Peguera ...	NR	NR									⁶ 170.6 ² 206.1	
Total											376.7	
ECUADOR												
Ministerio de Recursos Naturales y Energ.—Cepe-Ancon, Santa Elena field, Guayas	NR	NR	1					1.9	8.6			
Cepe-Cautivo plant, Santa Elena field, Guayas	NR	NR	1					0.5	0.5			
Total								2.4	9.1			
EGYPT												
Amoco International—Abu Gharadig plant and field, Western Desert	146.0	84.0	4&7								¹¹ 185.4	
Dashour LPG plant, Abu Gharadig field, Helwan	137.0	79.0	4&7					87.6				
Egyptian General Petroleum Corp.—Abu Qir plant and field	150.0	65.0	6							58.5		
Petrobel—Abu Madi plant and field	120.0	35.5	6							34.0		
Total	553.0	263.5					87.6		92.5	185.4		
GERMANY												
Norddeutsche Erdgas Aufbereitungs GmbH—1—Scholen, Lower Saxony (near Sulingen) ..	38.0	21.0	1 (sulfur recovery only)									
2—Scholen, Lower Saxony (near Sulingen) ..	75.0	75.0	1 (sulfur recovery only)									
3—Scholen, Lower Saxony (near Sulingen) ..	205.0	175.0	1 (sulfur recovery only)									
Wintershall AG—Dueste I and II, Staffhorst, Diepholz, Lower Saxony	NR	155.0	Sepasolv (sulfur only)									
Ruetenbrock, Emsland, Weser-Ems	NR	45.0	Selextol (sulfur only)									
Total	542.9	451.0										
HUNGARY												
OKGT:												
Babosca plant and field, Somogy	4.2	2.9	6								²¹ 1.0	
Ebes plant and field, Hajdu-Bihar	8.5	3.9	6								¹¹ 0.8	
*Eger plant, Demjen field, Heves	5.1	0.2	5								¹¹ 0.7	
Hajdusoboszló plant and field, Hajdu-Bihar ..	77.7	66.2	2&4	32.6			27.6			30.0	⁶ 6.0	
Kardoskut plant, Pusztafoldvár field, Békés ..	42.4	8.5	3								¹¹ 3.7	
Kisujzállás plant and field, Szolnok	8.5	3.4	6								¹¹ 1.7	
Ortaháza plant and field, Zala	4.2	3.3	6								¹¹ 1.5	

Company, plant, location	MMcfd		Process method	Production—1,000 gal/day (Average based on the past 12 months)							Other
	Gas capacity	Gas throughput		Ethane	Prop.	Isobut.	Normal or unsplit butane	LP-gas mix	Raw NGL mix	Debut. nat. gaso.	
Szank plant and field, Bács-Kiskun.....	77.7	29.8	3	.....	.....	.....	.....	.....	31.9	.....	.....
Szeged plant, Algyó field, Csongrád.....	501.5	375.3	2-3&6	.....	134.6	9.7	123.5	.....	.....	212.7	¹ 38.3
Táziár plant and field, Bács-Kiskun.....	28.3	14.1	6	.....	.....	.....	.....	.....	.....	.....	⁹ 185.4 ¹¹ 6.6
Total	758.1	507.6		.....	167.2	9.7	151.1	.....	31.9	242.7	245.7

INDONESIA

Atlantic Richfield Indonesia Inc.—Ardjuna, nw Java Sea, 90 miles ne of Jakarta.....	230.0	96.0	7	.....	327.6	.....	222.6	.....	.....	.....	.....
Union Oil Co. of California—Santa LEX, Attaka, East Kalimantan.....	130.0	135.0	7	.....	156.0	.....	215.0	.....	.....	.....	.....
Total	360.0	231.0		.....	483.6	.....	437.6	.....	.....	.....	.....

ITALY

AGIP SPA—Brughero, Milan, Lombardia, Po Valley.....	388.0	319.0	1	.....	.....	.....	.....	.....	.....	.....	.....
Casalborsetti, Porto Garibaldi field, Bologna, Emilia-Romagna, Po Valley.....	953.0	447.0	1	.....	.....	.....	.....	.....	.....	0.2	.....
Casirate d'Adda, Malossa field, Bergamo, Lombardia, Po Valley.....	211.0	130.0	2	.....	.....	.....	.....	120.0	.....	780.0	.....
Crotone, Luna field, Catanzaro, Calabria.....	268.0	155.0	1	.....	.....	.....	.....	.....	.....	0.1	.....
Gagliano, Enna, Sicily.....	141.0	20.0	5	.....	.....	.....	.....	.....	.....	12.5	.....
Hera Lacinia, Crotone, Catanzaro.....	88.0	26.0	1	.....	.....	.....	.....	.....	.....	.....	.....
Pineto, Fratello-Squalo field, Roseto, Pescara	176.0	20.0	1	.....	.....	.....	.....	.....	.....	.....	.....
Ravenna Mare, Porto Corsini Est and Angela fields, Bologna, Emilia Romagna, Po Valley.....	265.0	72.0	1	.....	.....	.....	.....	.....	.....	0.1	.....
Rubicone, Cervia and Cesenatico fields, Bologna, Emilia-Romagna, Po Valley.....	176.0	92.0	1	.....	.....	.....	.....	.....	.....	0.2	.....
Sergnano, Lombardia, Milan, Po Valley.....	1,765.0	1,412.0	1	.....	.....	.....	.....	.....	.....	.....	.....
Total	4,431.0	2,693.0		.....	.....	.....	.....	120.0	.....	793.1	.....

KUWAIT

Kuwait Oil Co.—Mina Al-Ahmadi.....	†	†	†	.....	(409.7)	.....	(425.8)	.....	(348.7)	.....	.....
Al Shuaiba.....	1,680.0	848.0	2	.....	2,107.8	.....	1,251.7	.....	799.3	.....	.....
Total	1,680.0	848.0		.....	2,107.8	.....	1,251.7	.....	799.3	.....	.....

†100,000 b/d condensate capacity and 35,139 b/d throughput. †Fractionation. (Figures in parenthesis do not represent primary production, and are not included in totals)

LIBYA

Oasis Oil Co. of Libya Inc.—*Bahi, Concession 32.....	15.0	10.0	2&4	.....	.....	.....	.....	.....	.....	.....	¹¹ 160.0
*Dahra, Concession 32.....	140.0	20.0	2&4	.....	.....	.....	.....	.....	.....	.....	¹¹ 11.0
Defa, Concession 59 and 71.....	104.0	47.0	4	.....	.....	.....	.....	.....	.....	.....	¹¹ 210.0
Waha, Concession 59W.....	52.0	52.0	4	.....	.....	.....	.....	.....	.....	.....	¹¹ 170.0
Occidental of Libya, Inc.—103A, Sirte Basin Petroleum Zone II.....	670.0	450.0	3	.....	.....	.....	.....	.....	666.0	.....	.....
103D, Sirte Basin, Petroleum Zone II.....	420.0	255.0	3	.....	.....	.....	.....	.....	375.0	.....	.....
Socialist People's Libyan Arab Jamahiriya, Marsa Brega.....	450.0	393.0	NR	.....	.....	.....	.....	37.8	4,536.0	.....	.....
Total	1,851.0	1,227.0		.....	.....	.....	.....	37.8	5,577.0	.....	551.0

MEXICO

Petroleos Mexicanos—Cactus I, Chiapas.....	500.0	¹ 494.4	7	.....	² 1,255.7	.....	.....	.....	.....	.....	.....
Cactus, A, B, C, D, Chiapas.....	600.0	(1)	6	.....	(2)	.....	.....	.....	.....	.....	.....
Ciudad Pemex A, Tabasco.....	550.0	552.2	2	.....	³ 1,608.7	.....	.....	.....	.....	.....	.....
Ciudad Pemex C, Tabasco.....	183.0	199.1	7	.....	(3)	.....	.....	.....	.....	.....	.....
La Venta A, Tabasco.....	205.0	210.5	2	⁴ 501.8	⁵ 1,127.9	.....	.....	.....	.....	.....	.....
La Venta C, Tabasco.....	182.0	217.7	7	(4)	(5)	.....	.....	.....	.....	.....	.....
Pajaritos, Veracruz.....	192.0	183.0	7	224.9	88.1	.....	.....	.....	.....	.....	.....
Poza Rica A, Veracruz.....	220.0	5.5	2	⁶ 419.4	⁷ 496.7	.....	.....	.....	.....	.....	.....
Poza Rica C, Veracruz.....	275.0	251.7	6	(6)	(7)	.....	.....	.....	.....	.....	.....
Reynosa, Tamaulipas.....	550.0	349.4	2	116.4	402.9	.....	.....	.....	.....	.....	.....
Total	3,457.0	2,463.5		1,262.5	4,980.0	.....	.....	.....	.....	.....	.....

1. Total throughput for all five Cactus plants. 2. Total propane plus. 3. Total C.P. propane plus. 4. Total La Venta ethane. 5. Total La Venta propane plus. 6. Total Poza Rica ethane. 7. Total Poza Rica propane plus. (Propane column is all propane plus).

NETHERLANDS

Amoco Netherlands—*Bergen, North Holland..	330.0	184.0	5								¹¹ 6.0
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NEW ZEALAND

Natural Gas Corp. of New Zealand Ltd.—Kapuni, Taranaki, Lot 1.Dp 5227, Sec. 11, B-XVI, Kaupokouni SD area 11.2.27.....	96.0	58.0	1-3-4		14.4		0.6			4.3	
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PAKISTAN

Oil and Gas Development Corp.—Sari-Hundi plant and field, Dadu district, Sind province	25.0	8.9	1								¹¹ <0.1
Pakistan Oilfields Ltd.—Dhulian field, Attock district, Punjab province.....	30.0	13.2	2	.....	.....	.....	21.3	.....	.....	7.8	.....
Meyel field, Attock district, Punjab province	20.0	20.0	1	.....	.....	.....	.....	.....	.....	.....	.....
Sui Gas Transmission CL—*Sibbi district, Baluchistan.....	670.0	630.0	1&5	.....	.....	.....	.....	.....	.....	.....	¹¹ 3.1

Company, plant, location	MMcfd		Process method	Production—1,000 gal/day (Average based on the past 12 months)							
	Gas capacity	Gas through-put		Ethane	Prop.	Isobut.	Normal or unsplit butane	LP-gas mix	Raw NGL mix	Debut. nat. gaso.	Other
Sui Northern Gas Pipelines Ltd.—Baluchistan	1140.0	48.0	1	....	....	....	....	....	....	....	....
Total	885.0	720.1		....	....	....	....	21.3	....	7.8	3.1

†Two units at 70.0 each.

PERU

Petroleos del Peru—Lagunitos, La Brea y Parinas fields, Talara, Piura	14.0	4.8	1	....	....	....	0.1	0.7	....	3.0	†0.3
Pozo y Parinas, La Brea y Parinas fields, Talara, Piura	70.0	36.9	2	....	....	....	0.9	7.9	....	34.0	†3.6
Total	84.0	41.7		....	....	....	1.0	8.6	....	37.0	3.9

†Hexane.

QATAR

Qatar General Petroleum Corp.—Umm Said No. 1	340.0	NR	3	....	676.0	....	389.0	....	....	....	††238.0
Umm Said No. 2	240.0	NR	3	....	564.0	....	411.0	....	....	....	††366.0
Total	580.0	464.0		....	1,240.0	....	800.0	....	....	....	604.0

SAUDI ARABIA

Arabian American Oil Co.†—Abqaiq	580.0	NR	3&4	....	....	....	....	....	11,550.0	....	....
Berri	600.0	NR	1-2-3-4	....	....	....	....	....	2,650.0	....	....
Ras Tanura	120.0	NR	3&4	....	....	....	....	....	2,100.0	....	....
Ras Tanura	1,500.0	NR	†	....	(6,100.0)	....	(4,400.0)	....	....	(4,600.0)	....
Shedgum	....	....	3-4	....	....	....	....	....	....	....	....
Total	2,800.0	2,240.0		....	....	....	....	....	13,040.0	....	....

†All figures are capacity. †Fractionation. (Figure in parenthesis do not represent primary production, and are not added in totals). Ju'Aymah is fractionation only—no figures available.

UNITED KINGDOM

Amoco U.K.—Bacton, Leman 49/26 27-28&53/1-2	1,200.0	526.0	3	....	....	....	....	....	....	....	††10.0
Indefatigable 49/18 19-23&24, Norfolk Co.	800.0	380.0	3	....	....	....	....	....	....	....	††37.0
Total Oil Marine Ltd.—Saint Fergus, Frigg field, Grampian province	65.0	46.0	3	....	....	....	....	....	....	1,572.5	....
Total	2,065.0	952.0		....	....	....	....	....	....	1,572.5	47.0

VENEZUELA

Corpoven—Bajo Grande fractionation plant [†] , Zulia	....	....	†	....	(98.5)	....	(79.0)	....	(79.3)	....	....
*Lama Liquids, Zulia	150.0	110.0	3	....	....	....	....	....	246.5	....	....
LPG, El Tablazo, Zulia	165.0	156.0	7	8.5	186.0	....	105.1	....	....	63.6	....
Lagoven—Bachaquero 1, Zulia	440.0	383.0	4	....	....	....	....	....	23.3	....	....
Tia Juana 1, Zulia	230.0	145.0	1	....	....	....	....	....	3.1	....	....
Tia Juana 2, Zulia	450.0	375.0	3	....	....	....	....	....	641.6	....	....
Tia Juana 3, Zulia	455.0	402.0	3	....	....	....	....	....	641.6	....	....
Ule fractionation plant, Punta Gorda Zulia	....	....	†	....	(478.3)	....	(444.7)	....	....	(386.6)	....
Maraven—Lamar Liquido, Lake Maracaibo, Zulia	162.0	120.0	3	....	....	....	....	....	55.5	....	....
La Paz, Zulia	150.0	90.0	1	....	44.5	17.2	41.6	....	40.2	....	....
Mara, Zulia	55.0	17.0	1	....	4.9	....	9.4	....	....	6.8	....
Meneven—Guara, Anzoategui	42.0	13.0	1	....	....	....	....	....	1.7	14.2	....
Oficina, Anzoategui	9.0	0.2	1	....	....	....	....	....	0.1	0.8	....
San Roque, Anzoategui	45.0	13.0	1	....	....	....	....	....	6.5	9.8	....
Santa Rosa, Anzoategui	150.0	120.0	2	....	....	....	397.0	....	....	15.2	....
VPM, Monagas	36.0	15.0	1	....	....	....	5.6	....	....	5.4	....
Total	2,539.0	1,959.2		8.5	235.4	17.2	156.1	402.6	1,660.1	115.8	....

†Parenthetical figures do not represent primary production, and are not added to totals. Bajo Grande plant fractionates raw NGL mix from Corpoven's Lama plant and Maraven's Lamar Liquids plant. Ule plant fractionates all raw NGL mix from Lagoven plants.